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FEBRUARY, 1936

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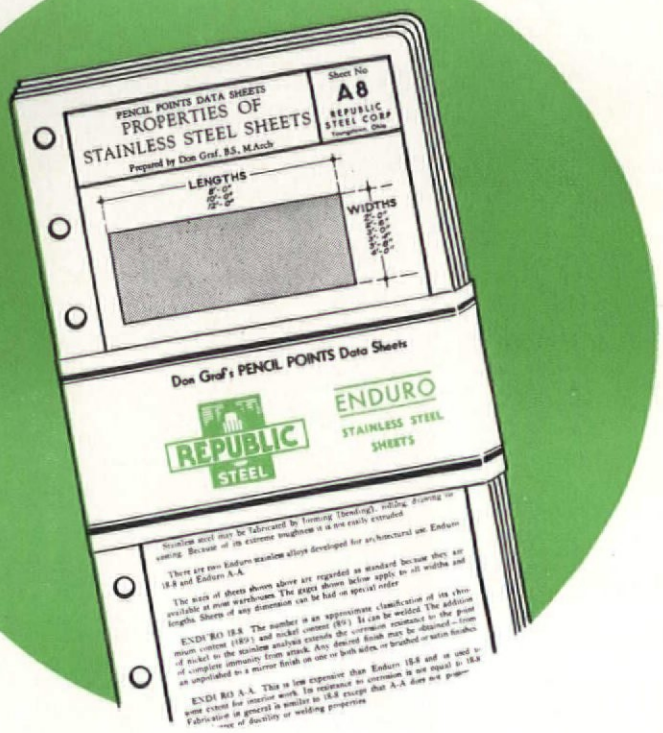

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ARCHITECTURAL FORUM

FEBRUARY 1936

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Editor, HOWARD MYERS; *Managing Editor*, RUTH GOODHUE
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VOLUME LXIV NUMBER TWO

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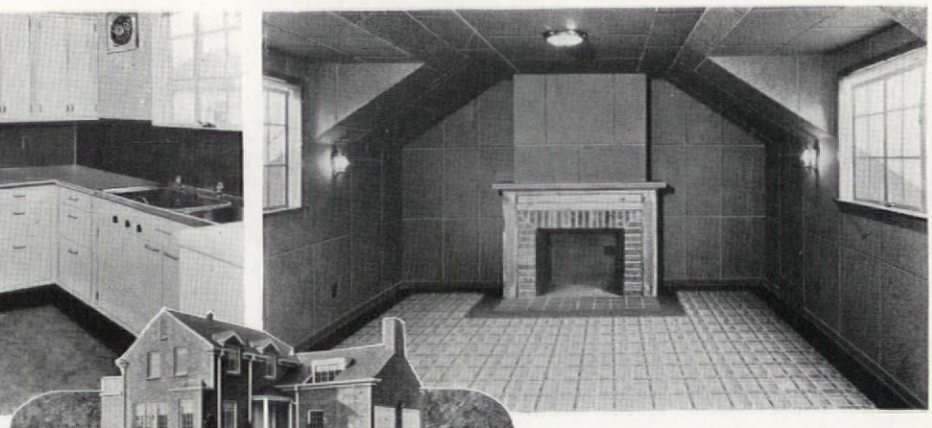

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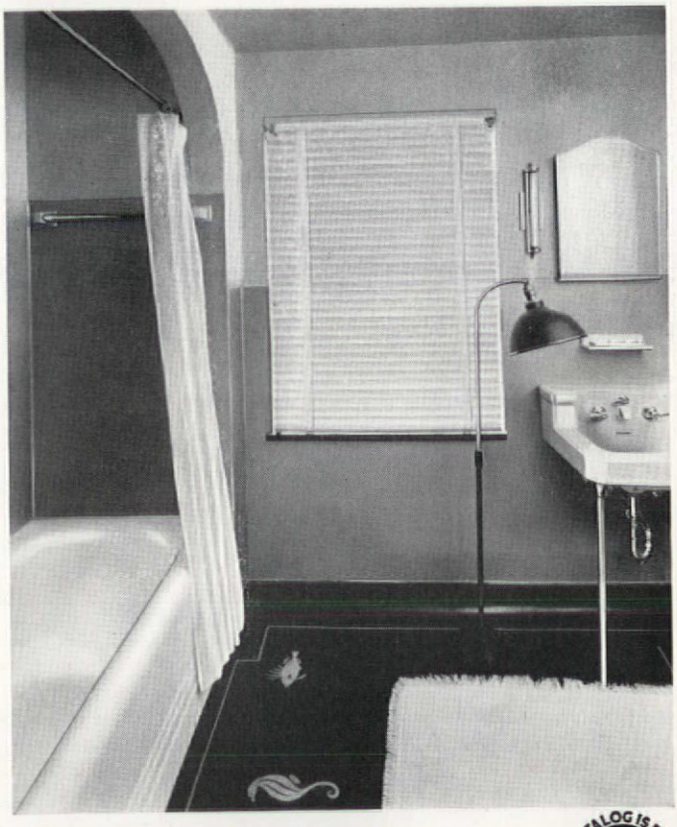

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VOLUME LXIV
Number 2

THE MONTH IN BUILDING

VOLUME. Necessarily a half month behind in its reporting facilities, the Department of Labor last month brought the year 1935 to a statistical close with its figures for December: total building permits issued for the month $76,120,000; total for the year, $829,433,637 (see chart, p. 140).

As usual, neither the Labor Department's nor the Dodge figures could be taken as a final measure of total volume throughout the country. The former are for approximately 800 cities throughout the U. S. with a population over 10,000, and habitually run shorter than the Dodge figures, covering only 37 States east of the Rockies. The Dodge figure amounted to $1,365,701,800 for 1935. The 1935 Labor figure was one-fifth of the peak as recorded by the Labor Department in 1925. The Dodge figure was likewise a fifth of the peak as recorded by Dodge in 1928.

Prime point about the year's figures was the upturn in residential building: for the first time in more than a decade the residential total showed an increase over the preceding year. Biggest pick-up occurred not in districts where the Government is priming the housing pump with Federally financed projects, but in the Mountain States. Unusual activity in Arizona featured the latter. The completion of two new dams in the Salt River Valley above Phoenix, and a general influx of permanent residents as a result of depression-born stay-at-home travel partially explain the latter.

Only State to register a decrease in home building over 1934 was Vermont. The sad Vermont total recalled the bad foreclosure situation among Vermont's savings banks (ARCH. FORUM, Sept. 1935, p. 39), the ultra-conservatism of the typical Vermonter, the fact that it was under lamplight that President Coolidge was sworn into office in his Vermont ancestral home.

NAREB'S CHOICE. The National Association of Real Estate Boards, trade association for more than 11,000 developers, owners, managers and sellers of real property throughout the U. S. and proud possessor of trade-mark rights to the word "realtor," has made a significant choice this year in selecting a head. For the man it inducted as president last month was a Floridan, tempered by years of Florida's ups and downs. Significantly, too, Walter W. Rose, of mid-state, agriculturally supported Orlando, has long been a fighter for tax reductions.

Florida is currently enjoying good times in what its more serious residents like to think is the beginning of a long-time flow of good rewards from better behavior. Mr. Rose's origin in one of Florida's small, conservative centers helped him win a State Senatorship in 1933, also made him a logical choice for the NAREB presidency this year. Two previous presidents, energetic Hugh Potter of Houston and practical-minded Walter S. Schmidt of Cincinnati, both possessed an intelligent view of urban problems. In a year when agri-

Florida's Rose

culture must try its own feet again, when the small town housing problem must also have its attention, a small-towner is more than appropriate.

As president of the Walter W. Rose Investment Co., Florida's Rose has engaged in every phase of the real estate business, including subdivision. As State Senator, he formulated a model legislative program looking toward more equitable taxes on real estate. Its chief feature was Florida's famed homestead exemption law, freeing homes under $5,000 from taxation. Bringing this experience into play, he is expected effectively to push Point 6 in the Association's objectives for 1936: "Modernization of our tax laws." Other NAREB objectives: prevention of further Government encroachments in realty; promulgation of its "Neighborhood Improvement District" plan; passage of the Fletcher Mortgage Discount Bank bill.

$5,000 HOUSE. Ninety per cent of the U. S. live in houses costing less than $5,000. This is the statistic which, like an irritating gnat, has buzzed in to many a conference to discomfort the building industry. But current production methods, generally speaking, do not permit a margin of profit large enough to justify the erection of such a low-priced home, and the largest building market in the U. S. has therefore remained virtually untapped.

During his recent visit to this country Merchant Gordon Selfridge pointed out that England had reached this lush pasture with the aid of a Government subsidy. More recently, Allie Freed and his Committee on Economic Recovery have asked President Roosevelt to do as much for the U. S. Their report calls for the creation of forty $1,000,000 companies who, with the aid of a $350,000,000 Government subsidy, would produce less-than-$6,000 houses.

Last month the President enlivened a particularly dull press conference by revealing, somewhat guardedly, his own ideas on the subject. Prime point was that the building industry should produce a better value in cheap houses before it looked for a Government subsidy. Remarking that today's $500 automobile would cost $2,500 to reproduce in single units, the President then dwelt at pointed length on the virtues of mass production. Thus, squarely, was the problem tossed into the office of the prefabricator. Let him design and produce a good less-than-$5,000 house, and the Government, presumably, would give Building its helping subsidy.

MORTGAGE BANK. The question whether Building needs a mortgage bank, or banks, shot swiftly to the fore last month. Congress was contemplating adding to the already established provisions for National Mortgage Associations another for a central mortgage bank, and New York State, in the final throes of wiping out its guaranteed mortgage sins, was pondering a State Mortgage Bank.

Introduced by Florida's venerable old Duncan U. Fletcher of the Senate Banking and Currency Committee, the Congressional bill is the same one which the National Association of Real Estate Boards has for years been pushing. It would create a bank for the discounting of mortgages of all types. Its main objective is greater liquidity, together with attendant lowering of interest rates. The current proposal calls for private financing of this bank.

With adequate statistics lacking, opinions have had to be heavily relied upon by sponsors of the bill. To a Banking Committee questionnaire, some 700 answers

received by the middle of last month were understood to be 75 per cent in favor of a mortgage bank. Surprising fact was that favorable replies were coming from large institutions, long against Government-in-Business, but now apparently willing to have a discount agency on hand. Whether another poll by the Committee — one of the heads of all U. S. agencies concerned with mortgages — would yield such results was seriously to be doubted. For already, discounting of mortgages is open to many lenders. Commercial banks may discount through the Federal Reserve; building and loan associations, etc., through the Federal Home Loan Banks. And the provision for National Mortgage Associations has made possible the rediscounting of FHA mortgages.

Still one other source of information remained to the Committee. For out of New York State was shortly expected an excellent formula for a mortgage bank (see p. 132). In fact, an actual bank will probably sprout from this before either a National Mortgage Association or a possible Fletcher bank is formed. This probability may be more easily appreciated, even in view of recommendations for a minimum capital higher than that required for National Mortgage Associations, when it is understood that the New York situation particularly demands such an agency. Reason: a mortgage money source $3,000,000,000 big was wiped out in the guaranteed mortgage collapse of '33. Not only to Chairman Fletcher but to the building industry as well it was patently worthwhile to observe the nature of such a pioneer mortgage bank.

RADIO FORUM. Mr. Stephen F. Voorhees, president of the American Institute of Architects, said: "So I repeat that a quality house will result from quality design. . . . "

Mr. Robert V. Fleming, president of the American Bankers' Association, said: "Down through the ages, commencing with the days of the cave man. . . . "

A studio hand described on the script as "40, direct, simple," and introduced as Mr. Harold Nelson, contractor, said: "I certainly appreciate this opportunity. . . . What I need more than anything else is a *selling plan*."

But Johns-Manville, in its pioneer broadcast from eleven to noon, one Monday last month had obviously reserved the privilege of urging a selling plan upon the industry to yet another speaker on the program. When Mr. George LaPointe of the National Retail Lumber Dealers' Association uprose to speak, it was with a different tune. "What is to be our part as retailers in this revival of building? Simply stated, it is this: We must become merchants rather than dealers! . . . We must coordinate the local building industry under our leadership and support!"

Thus those in the industry who listened-in heard Johns-Manville's idea of just how building integration locally should be brought about. It might well have included a realtor, and have considered the part he plays in local salesmanship. And it did not say what should be done in these cases where the local material dealer is not sufficiently aggressive to do the necessary coordinating. But from "Builders of America," a march especially composed by Bandman Edwin F. Goldman, to the exhortations by Johns-Manville's President Lewis Brown, the broadcast remained the month's smartest merchandizing trick.

MANAGEMENT RULES. After a two-year study of the problem the Institute of Real Estate Managers of the National Association of Real Estate Boards last month unmasked to its members a set of eight rules of practice in the management of property. Intended to eliminate sharp practice rather than accomplish any drastic change of recognized procedure, the rules provided that:

Clients' funds shall be segregated from moneys belonging to the management firm.

The segregated accounts shall contain 100 per cent of all funds belonging to the clients.

Clients' funds shall not be handled or accounted for by an officer or employe who is not bonded.

Unless the client instructs otherwise, in writing, the agent shall, within the first ten days of each month, send him a check covering in full the balance in his account on the last day of the preceding month, together with a complete itemized statement of receipts and disbursements.

The managing agent shall have a specific understanding with each client as to fees and commissions, and these charges shall be shown clearly on the client's monthly statement as items paid to the agent.

The agent shall accept no commissions, rebates, discounts or other benefits from the management of a client's property other than those specifically agreed upon.

When the agent deducts cash discounts from bills or purchases, his statement to the owner concerned shall show only the disbursement of the net amount actually paid.

HOUSING AUTHORITIES. As Senator Robert F. Wagner's housing bill, providing for delegation of public housing to local Housing Authorities, became something more than a possibility last month, even the most constant friends of slum clearance were surprised to learn that as many as twenty States had already made provision for the formation of such bodies in cities within their bounds. Two years ago, at the start of the PWA housing program, a proposal to place PWA's funds through these agencies had to be shelved, since only six States had adopted such legislation.

The original Housing Authority Act was pushed through the Ohio legislature by Cleveland's Ernest J. Bohn, an energetic municipal servant devoted to housing. It provided for a State Housing Board with authority to create a Housing Authority when needed. New York's Housing Authority bill, formulated first, was passed later. The number of Authorities is constantly growing. And the twenty States with the necessary enabling legislation have around 30 between them.

Usually a Housing Authority has five members, appointed by the Mayor. Last month the National Association of Housing Officials investigated the character of 24 Housing Authorities. It found:

16 lawyers	6 merchants
12 public officials	5 construction men
10 manufacturing officials	4 labor union officials
10 civic officials	4 public utility officers
9 realtors	2 doctors
9 educators	2 architects
9 bankers	2 journalists
7 clergymen	1 electrical engineer
7 public welfare officials	1 radio announcer

"Such a classification," triumphantly declared Executive Director Coleman Woodbury, "shows the untruth of many statements and innuendos about the newly established public housing agencies. They are not dominated by social workers or by any other one class."

MARRIAGES. In 1932, as a part of President Hoover's economy program, the Bureau of the Census discontinued the collection of marriage statistics. Thus ended a record assiduously kept since 1889. With national interest in Building low, little enough use had been made of these statistics. And the Bureau's figures were generally two years old when the public got them, via the almanacs.

Marriages are important to Building because they create the chief demand for new home building. The wise real estate man has always kept track of marriage license figures locally, yet the building industry as a whole has never had a nation-wide, up-to-the-minute gauge. Because it believes such a gauge more than ever important today, THE FORUM inaugurates with this issue (p. 142) a chart of marriage licenses issued monthly in three dozen big U. S. cities, distributed as evenly as possible throughout the country.

The series will start with figures for January, 1933. As a background to this, it will be remembered that marriages have always fallen off in depression time, and generally risen markedly immediately before a building revival. Since 1905 only four times has the rate dipped lower than ten marriages per thousand of population: in 1908-09, 1918, 1928 and throughout the past six years. The rate hit an all-time low of 7.87 marriages per thousand population in 1932, beyond which the Bureau's figures do not go. Thus the start of THE FORUM's chart may be taken as the greatest depth to which the figures have ever plunged. And the rise which it records is obviously one of the most cheering reports from the statistical front today.

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LETTERS

Long Pull

Forum:

May I comment . . . on "the new financing that cuts costs," (October, page 231)? The savings in financing effected at the expense almost altogether of the small thrifty individual of this country are not going to the home owner but have been wholly absorbed by added labor and material costs.

In this territory construction costs are approximately as high as they were at the peak of the boom times, with the income of the nation about half. That is not a sound basis. The only thing that is making people build today is either ignorance of the facts, partly because of the smoke screen and ballyhoo of the building industry and the Administration, or a fear of inflation and a desire to put funds into something tangible.

I have built more than half a thousand houses, but today, instead of building, I'm buying homes already built, on the assumption that they are underpriced in comparison with new homes.

If we are really interested in the permanent well-being of the building industry we should work for the long pull rather than temporary profits.

What good is a high hourly wage scale with few hours of labor, when a reasonable scale by encouraging construction might bring much greater employment and far higher monthly earnings?

The small saver has sacrificed interest in vain, in my opinion.

FREDERICK R. PEAKE

Vice President
Community Loan and Building Assn.
Berkeley, Calif.

In Search of an American Style

Forum:

On his arrival here, the celebrated French architect, M. Le Corbusier, told the reporters that our skyscrapers were not high enough. A few days later, at a luncheon given in his honor, he asserts that jazz music and Harlem night clubs constitute one of the most interesting aspects of American culture. The chances are that the public will take his first statement as a bit of waggery and the second one as a rather subtle but serious comment. Actually, they are nothing of the sort. Le Corbusier's criticism of our skyscrapers is, in fact, a brief and journalistic way of expressing a very logical theory he has developed in regard to the functions of architecture in a modern city. On the other hand his praise of our nocturnal amusements is merely a repetition of a rather stale intellectual cliche. . . .

There can be no question of Le Corbusier's rank as an architect. . . . He is however, essentially European in his point of view, and like nearly all Europeans incapable of understanding the psyche of this country. What James Trus-

Sichel

HAROLD STERNER
". . . indigenous . . ."

low Adams calls "The American Dream" is a thing that must remain a mystery to our continental brothers, and their art will always be a false guard to the young American artist who hopes to make his work a part of that dream.

It is for this reason that one cannot help feeling a vague sense of alarm when each new visitor from across the water sets foot on these shores. One wonders particularly in the case of architecture how long the work of European masters, past or present, is going to keep its hypnotic power over American designers. They have of course under the stress of economic pressure and modern engineering invented new forms of building, more particularly the skyscraper, but in the matter of style only a handful of men have given us an architecture that is indigenous in a sense that Mark Twain's writing is.

In Europe the names of Sullivan and Wright are famous and respected, but both of these men were given relatively few opportunities to practice their genius, and now Sullivan is long since dead and Frank Lloyd Wright approaching the end of his career. It seems as though the old adage that prophets are without honor in their own country is all too true.

It is of course impossible for the architects of any country to sit down at their drafting boards and announce with self-conscious bravado that they are going to invent a style which will be national. To begin with our architectural tradition in America is so hybrid that it offers a very meagre foundation upon which to erect a structure of style.

There remains however the American landscape and the lives of the people who live in that landscape. These can be looked at and absorbed for the asking. Our habits of life are special to ourselves, and the architect who studies these habits should be able to design houses that are at least as different from contemporary European examples as a baseball diamond is from a cricket field. The light in an American sky, the grain and texture of an American wood are no more like their European counterparts than a Kentucky hillbilly is like a Tyrolean mountaineer.

HAROLD STERNER

New York City

Investment Counsel

Forum:

Your October and December issues have proven exceptionally helpful to me in understanding the possible implications of the improved trend of residential building.

To one who has been trying to understand what goes into the construction of houses and particularly what the public is likely to demand from now on, these two issues have proven more helpful than anything else which I have seen.

I should think that you might have a good market for sale of subscriptions among financial people who are growing building minded.

BORDEN HELMER

Vice President
C. W. Young & Co.
New York, N. Y.

To Vice President Helmer of famed C. W. Young & Co., Investment Counsel: fie for assuming that he has first discovered that a subscription to THE FORUM is a good investment. The financial subscribers to THE FORUM now number in excess of 1,500.

Forum:

Having got the October copy of your periodical containing the publication of the 101 new villas by American architects, I want to tell you how very much delighted I am with this representation. Never did I see a publication which conveyed so clearly the variety, liveliness and high artistic level of your buildings as well as their oneness with the landscape. This is particularly shown by the many houses in a vivid manner of building: with their open loggias, verandahs and balconies. I have the impression that by this selection you have rendered an important service to the development of Modern Architecture in the U. S. A.

PROF. DR. MAX EISLER

University of Vienna, Austria

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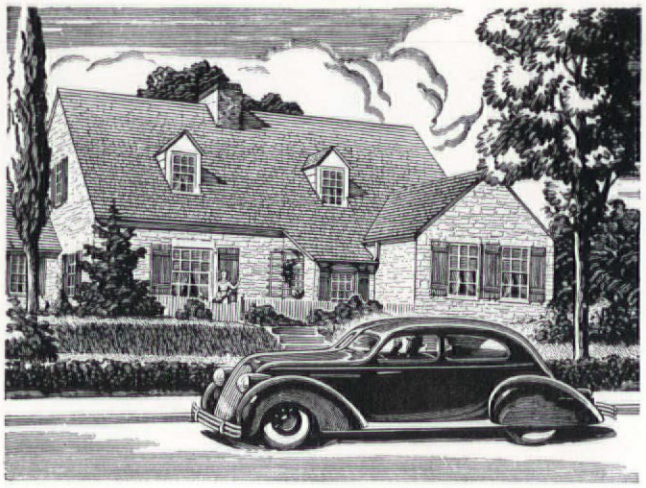
In view of the anticipated greater activity in the building industry, and particularly the active interest which builders and architects everywhere are displaying in the wider application of steel to home construction, the union of Kalman activities in the building field with those of Bethlehem Steel Company has special significance.

Architects and builders now have available the services of a compact, closely-integrated organization, thoroughly experienced in serving the building industry and producing a most complete range of steel products for all types of construction.



A NEW STEEL STUD FOR BUILDING CONSTRUCTION

A new development of great potentiality in the construction of residences—and of other light-occupancy structures, as well—is the Bethlehem Steel Stud. This is a light-weight, open-web member, well suited for the exterior walls and interior bearing walls of dwellings. It embodies the results of years of experience in the design and manufacture of steel building products.

With Bethlehem Steel Studs as vertical supports, Bethlehem Open-Web Steel Joists as floor members, and girth of light steel channels to provide lateral tie around the building, a permanent, rigid, fireproof, soundproof, non-shrinking steel frame is readily formed that, at reasonable cost, makes a home better and safer to live in, and a sounder investment.

BETHLEHEM STEEL PRODUCTS FOR BUILDING CONSTRUCTION

Bethlehem Wide-Flange Structural Shapes

Bethlehem Light Sections

Bethlehem Steel Studs

Bethlehem (Kalman) Joists

Bethlehem (MacMar) Joists

Beth-Cu-Loy Galvanized Sheets

Bethlehem Steel Pipe

Steel Door Frames

Kalmantrim Metal Lath

Bethlehem Insulating Wool

Reinforcing Bars

Steel H-Piling Steel Sheet Piling

★ ★ ★

Bethlehem District Offices are located at Albany, Atlanta, Baltimore, Boston, Bridgeport, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Honolulu, Houston, Indianapolis, Kansas City, Los Angeles, Milwaukee, New York, Philadelphia, Pittsburgh, Portland, Ore., Salt Lake City, San Antonio, San Francisco, St. Louis, St. Paul, Seattle, Syracuse, Washington, Wilkes-Barre, York. *Export Distributor:* Bethlehem Steel Export Corporation, New York.

BETHLEHEM STEEL COMPANY

GENERAL OFFICES: BETHLEHEM, PA.

Points of Distinction

OF MODEL 36

PENBERTHY AUTOMATIC ELECTRIC SUMP PUMP

1. MOTOR—Special ¼ h. p., induction type, 1725 r.p.m.—equipped with grease sealed lower ball bearing for vertical operation. Simple design, reliable operation, and especially protected against moisture. Current: 110 volts, 60 cycles; 220 volts, 60 cycles optional.
2. MERCURY SWITCH is sensitive, dependable and particularly adapted to float operation. It has no mechanical contacts to wear or spark.
3. OVERLOAD PROTECTION—Fusetron assures positive protection of motor against improper voltages, overload or other trouble.
4. PUMP & IMPELLER—Pump is top suction submerged type, equipped with ample strainer. Impeller is double shroud, high efficiency type, designed to eliminate vertical thrust.
5. IMPELLER SHAFT—Everdur bronze fully enclosed and guided at lower end by special alloy bearing.
6. STURDY CONSTRUCTION—Assures long life and satisfactory operation.
7. COPPER AND BRONZE THROUGHOUT—It is immune to corrosion.

Modern as 1936, The Penberthy Model 36 Automatic Electric Sump Pump offers irreproachable quality at the very moderate retail price of $39.50. Model 36 is made in one size only; maximum sump depth 24"; maximum capacity 1500 g.p.m. against 10' head.

Carried in stock by jobbers everywhere.

PENBERTHY PRODUCTS

PENBERTHY INJECTOR COMPANY

Manufacturers of Quality Products Since 1886

DETROIT, MICHIGAN

Canadian Plant WINDSOR, ONTARIO

FORUM OF EVENTS

FORWARD

With its ear as close to the ground as ever R. H. Macy's have decided that the time is now ripe for the general public not only to gape at but to buy modern design in furniture. Last month they opened on the seventh floor of their store their "Forward House of 1936," consisting of

FORWARD HOUSE — Glass Wall

fifteen rooms of furniture, including a five-room penthouse, a one-and-a-half room apartment, a three-room apartment, a one-room, all-purpose apartment and an executive office.

The exhibition is the direct lineal descendant of the Forward House 1933 in which Macy's gave commercial definition to modern furniture and accessories. But notable is the fact that this year's pieces are designed for modern comfort rather than Modern chic, and Macy's in their advertising sedulously stresses the point that Modern has "come home."

Most impractical but interesting manifestation of Macy's idea of home is a corrugated glass brick wall, incorporated of all places in the so-called "Budget Apartment." It affords light, but no glare, and is extremely handsome.

Nearly every piece shown was originally designed for the exhibit, and includes much of Russel Wright's work in light woods. Combination of materials was occasionally tortuous, but generally effective, and included as one of the most striking alliances that of white enamel with steel. That woods in furniture will shortly be subjected to style in the manner of Callot models could be guessed from the emphasis placed on avodire, verda, boxwood, holly and limed oak to the exclusion of other equally utilitarian woods.

PIX

Three and a half years ago Ben Schlanger, architect and member of the Society of American Engineers, took out patents on a reversed-slope floor for cinemas (Arch. Forum, Sept. 1932, p. 253). The Schlanger floor was designed to increase total visibility of any show-floor area by sloping down instead of up from the screen. Lack of new construction in cinema houses has retarded the general installation of these floors, and so far they are still in the class of curiosities.

Last month, however, the appearance of a small cinema in White Plains, N.Y., gave promise for a wider use of the Schlanger floor in the near future. Called "Pix" the new theater was the first of many which one John S. Clark, Jr. plans to erect all over the country. Prime feature was the reverse-slope floor.

The theater in White Plains is to be the model for all further Pix theaters. Primary demand behind its design was for a cinema which would be cheap enough to remove it from the speculative class as an investment. This consideration led to the further ones that the Pix theaters be cheap to build, suburban in location, small in size, cheap in admission price.

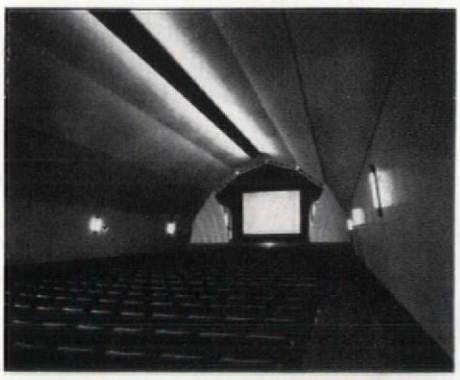
Architects Mario Bianculli and Piero Ghiani worked at the problem and finally produced the structure pictured below. The cinema has an over-all width of 35 ft., a depth of 95 ft. To a depth of 16 ft. from the front, the construction is entirely of concrete, faced with stucco. The remainder of the building consists of a series of steel roof trusses bedded in concrete piles and separated by concrete blocks laid to the cornice.

In the front of the theater are housed the box-office, lobby, manager's office, toilets, and projection booth. The eccentric form of this section is purely functional: the reception and work rooms are grouped to the right, while the left side, holding nothing, slopes abruptly to conform with the auditorium roof.

The auditorium seats 300, on the reverse Schlanger pitch, and the chairs are placed in a radial plan and staggered. The walls are of unadorned plaster, while the lighting trough and brackets are equipped with high and low wattage lamps. There is no balcony.

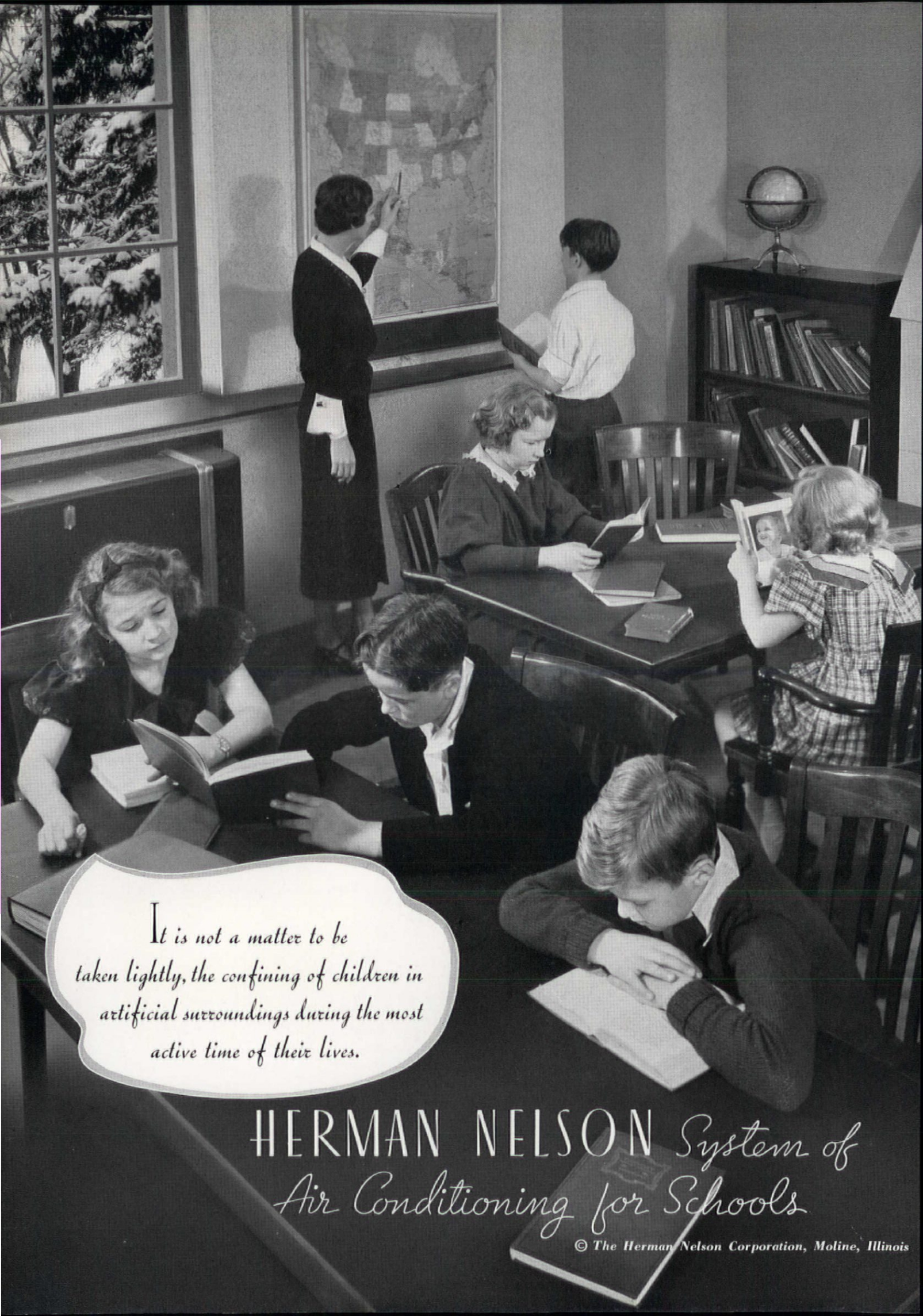
Under the screen lies the only excavated

(Continued on page 43)

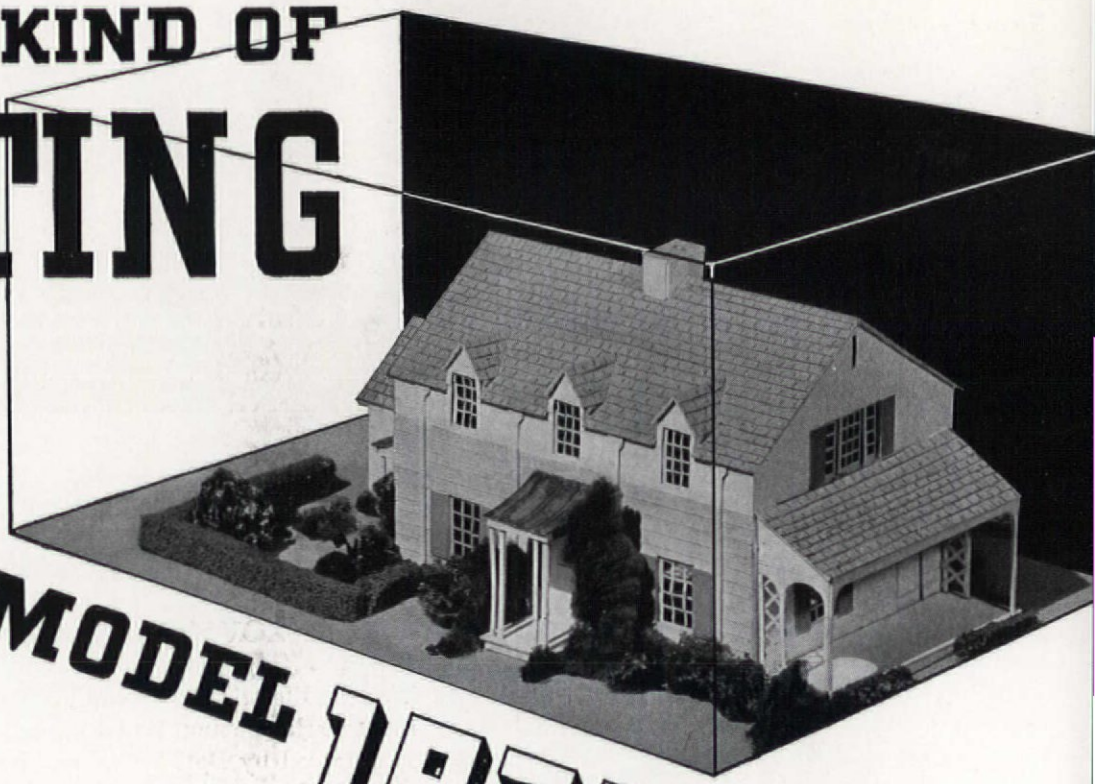


F. S. Lincoln Photos

PIX THEATER — Interior and Exterior. The screen (top) is flanked by two metal screens of neutral color. There is no center aisle. The exterior is white.


It is not a matter to be taken lightly, the confining of children in artificial surroundings during the most active time of their lives.
HERMAN NELSON System of Air Conditioning for Schools
© The Herman Nelson Corporation, Moline, Illinois

A NEW KIND OF HEATING



MODEL 1936

• New things have happened in radiator heating. New controls and accessories have been developed. Practically every part of the system has been improved. For example: • Arco Copper Pipe and Fittings connect boiler and radiators, replace iron • A new boiler—the No. 11 Arco Oil Furnace—has been designed especially for the small home • New controls start heat to the radiator, almost anticipating the thermostat's call • New valves see that heat is evenly distributed throughout the house • New radiators are better looking, more efficient, more in keeping with modern interior decoration. The sum of all these improvements is in the new American Radiator Heating Systems. The result is "Home Comfort You Never Dreamed Possible" • Into your 1936 homes must go 1936 comfort through this new, 1936 heating system. It is a new, different, better kind of radiator heating. There is a system that will bring such comfort to every type of home. The line is complete for every fuel and every requirement . . . and every part, down to the last small valve, is backed by the best known name in heating.

AMERICAN RADIATOR COMPANY

40 West 40th Street, New York, N. Y.

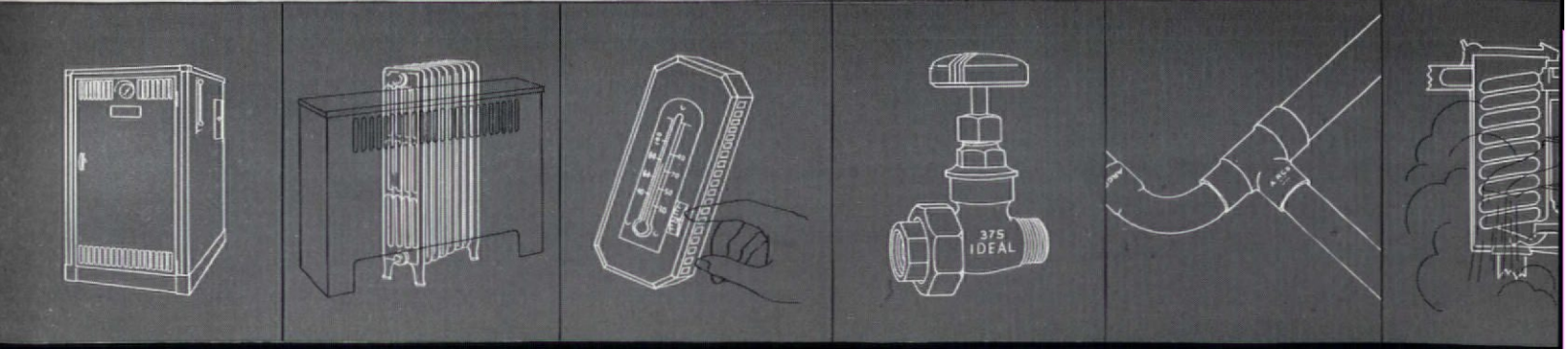
Division of AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

BETTER • HOUSING • PROGRAM

FEDERAL HOUSING ADMINISTRATION

AMERICAN RADIATOR HEATING SYSTEMS

NEW BOILERS FOR OIL, COAL, GAS . . . NEW VALVES, CONTROLS, EQUIPMENT . . . EVERY THING YOU NEED FOR 1936 HEATING IN YOUR NEW HOM



Compare ALL OTHER PLUMBING FIXTURES WITH *Beautyware*

Not in the past fifty years has there been a development in the plumbing industry that has created such a sensation, or caused so much talk, as the new Brigsteel Beautyware formed metal fixtures.

Leading architects in every section of the country have acclaimed it the most noteworthy achievement in the Industry. Leading home economists, color experts, stylists and authorities in the building and home appliance fields, have given it their unqualified endorsement. Beautyware has already begun to *make plumbing history.*

We ask you, for your own enlightenment and satisfaction, to compare all other plumbing fixtures with Beautyware. Compare them for beauty, for light weight. Compare them for color. Compare them for unusual features. And above all, compare them for *price*—as a new, sensational yardstick of value in better plumbing fixtures for better homes.

Call your Master Plumber. He will gladly take you to the Wholesaler's display room where you can see the different Beautyware fixtures, make any and every kind of comparison you choose, and then *form your own conclusions.*

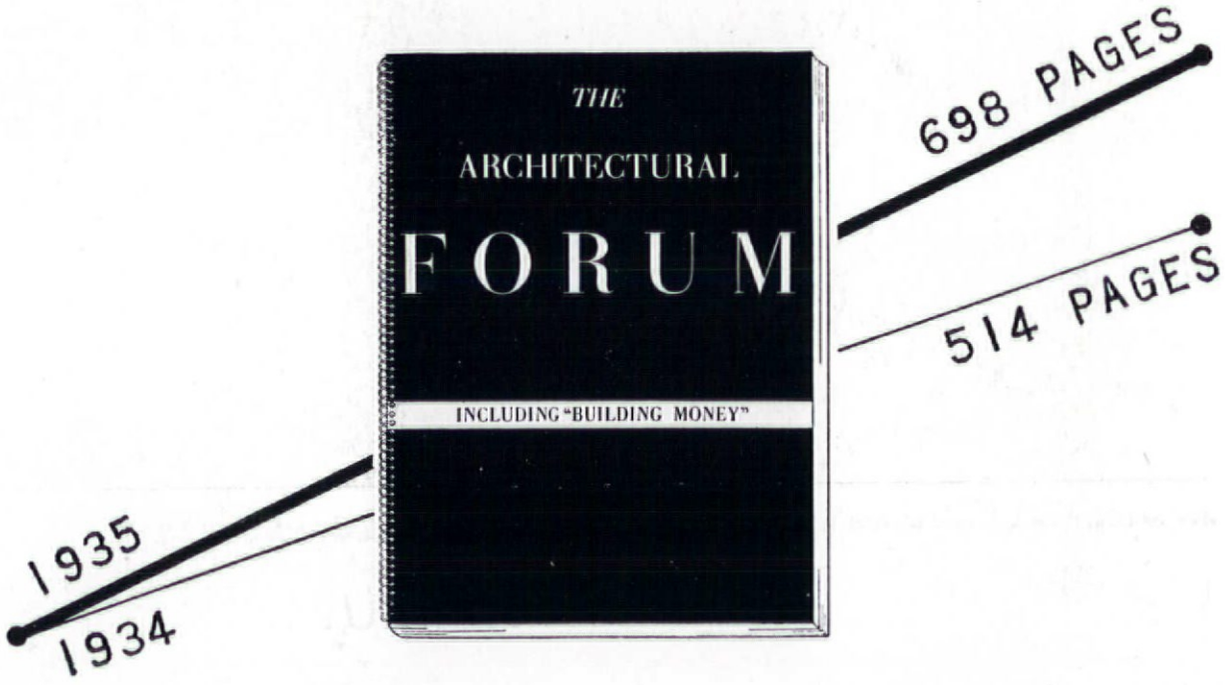
Literature, roughing-in drawings and complete specifications will be supplied by your Master Plumber. Before you specify any plumbing fixtures, *be sure to see Beautyware.*

PLUMBING WARE DIVISION
BRIGGS MANUFACTURING CO.
DETROIT, MICHIGAN

BRIGSTEEL
Beautyware

1936 WILL BE A PRESIDENTIAL YEAR

549 new houses will go up every day this year. And these 200,000 houses will not even commence to satisfy the demand. One of the many ways to predict building activity, is to measure the advertising carried by the leading magazine in this field. More than 40 years of experience have shown the accuracy of this method.

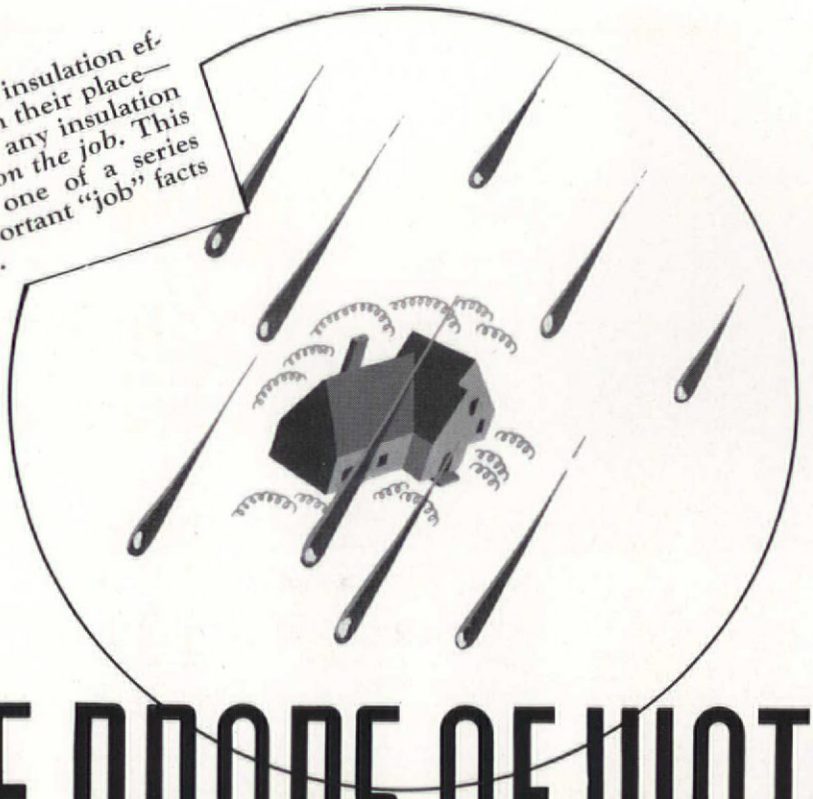


1936 finds THE ARCHITECTURAL FORUM with more than double the advertising contracted for at this date a year ago. It is also significant to note that THE FORUM's circulation has doubled in this period.

THE ARCHITECTURAL FORUM

Published by TIME Inc.

● Laboratory tests of insulation efficiency are useful in their place—but the final test of any insulation is what it will do *on the job*. This advertisement is one of a series dealing with important "job" facts about insulation.



LITTLE DROPS OF WATER

. . . don't let them spoil insulation value for YOUR clients!

Certainly you want to give your clients the most insulation value per dollar spent.

Then be sure that the insulation you specify is *fully* protected from moisture! For water and water vapor are deadly enemies of insulation. A good insulation material must be amply and positively protected from condensing moisture in walls, ceilings and roofs.

Balsam-Wool Blanket Insulation is *sealed* in a tough, waterproof covering. Moisture cannot get into this insulation to rob it of efficiency. There can be no condensation within the material to cause decay of framing members. Season after season, year after year, Balsam-Wool retains its high insulating value.

Unlike materials that are merely hand-packed or blown in, Balsam-Wool is fastened in place. It assures you of getting *continuous* insulation, with no uncovered spots for the wind to blow through. Balsam-Wool does not settle . . . does not change its form. In addition, it is vermin-proof and highly fire-resistant.

Balsam-Wool enables you to specify the right amount of insulation for every building and every climate. It comes in *three* thicknesses. With Balsam-Wool, you need never waste money by specifying *too much* insulation . . . never run the risk of specifying *too little*.

Complete information about Balsam-Wool is yours for the asking.

BALSAM WOOL

WEYERHAEUSER FOREST PRODUCTS

Made By The Makers of
NU-WOOD

WOOD CONVERSION COMPANY — **ST. PAUL · · · MINNESOTA**

Products of Weyerhaeuser

Above: Bigelow Carpeted Grill Room, Hotel Statler, Cleveland. Left: Lounge Bar in Hotel Statler, Buffalo—with Bigelow carpet in shaded block design of coral and copper.

Interior Architects and Decorators:

THE RORIMER-BROOKS STUDIOS, A. I. D.

CARPET COUNSEL BY BIGELOW

On many projects, we have had the pleasure of serving as Carpet Counsel to the Rorimer-Brooks Studios. They say we have given them splendid co-operation in carrying out their designs and that our carpets have proved eminently satisfactory.

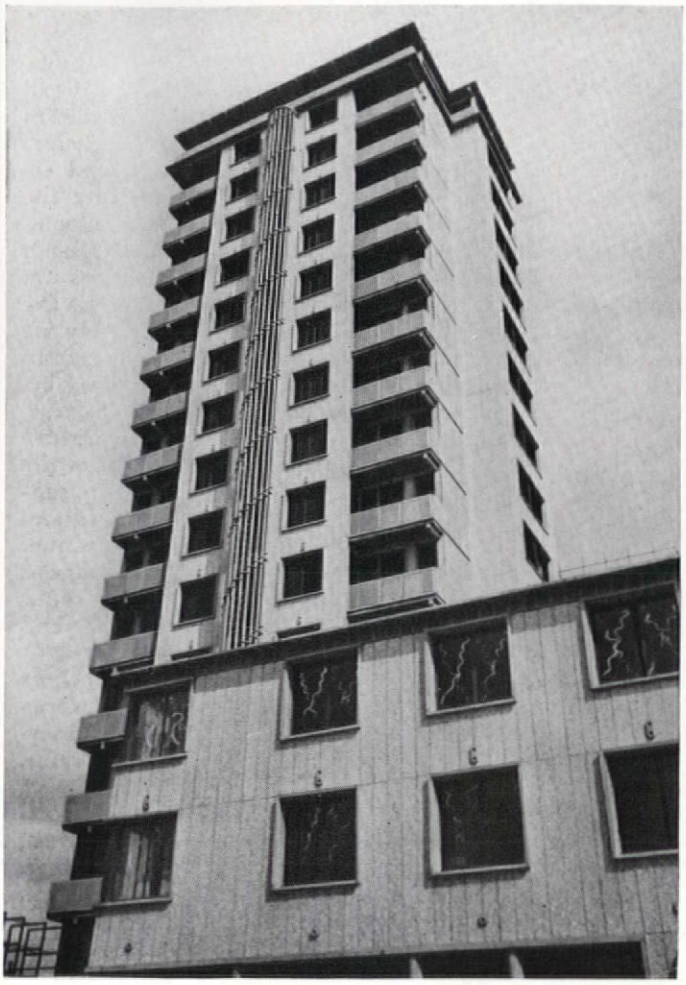
Many leading architects find us helpful because we try first of all to understand their specific problems. The two Statler bars illustrate our point. Naturally the oak-panelled Tudor room called for a floor treatment quite different from that used in the beautifully simple modern room. Our long and varied experience enabled us to supply exactly the right carpet in each case.

Whatever *your* carpeting problem, won't you let us tackle it with you? Just write or telephone to Contract Department, Bigelow-Sanford Carpet Co., Inc., 140 Madison Ave., New York, N. Y.

WOVEN BY THE BIGELOW WEAVERS

BRANCH OFFICES & SHOWROOMS IN 25 CITIES

PRODUCTS AND PRACTICE



HOUSING PROJECT AT DRANCY

HOUSING PROJECT AT BAGNEUX

French housing projects at Bagneux and Drancy, suburbs of Paris, designed by Beaudoin & Lods, Architects. At Bagneux, 800 family units were constructed by a philanthropic housing society. The 1,250 dwelling units at Drancy were built under the direct charge of the Housing Authority of the Department of the Seine.

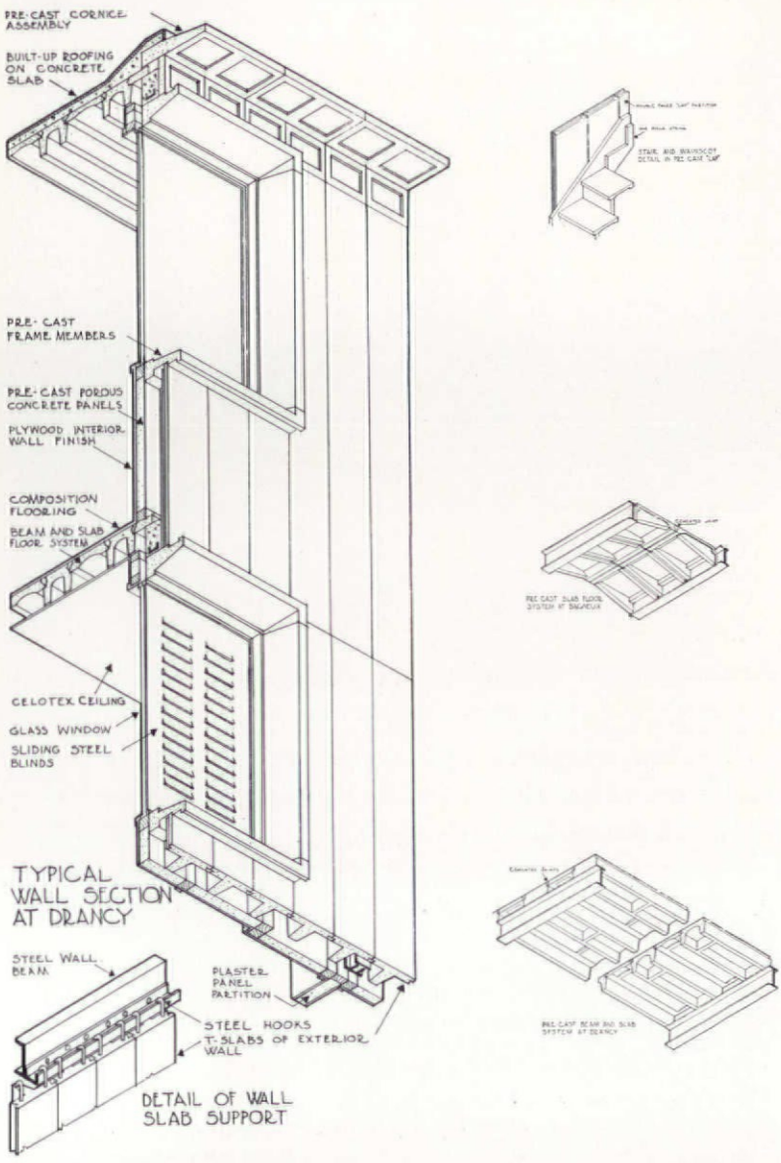
A LIGHT steel frame carries moderate sized concrete wall and floor slabs, which are precast at the site.

The field factory is developed at Drancy in three shops each housed in a light corrugated iron structure, easily dismantled and salvaged when the work is completed. The largest shop manufactures not only wall and floor units but also window enframements, balcony assemblies and cornice members. Metal molds are generally used and each piece is compacted by vibration of the mold. The wall slabs have a T-section a story high and about 12 in. wide. At Drancy they are surfaced with white marble pebbles, embedded by hand in the top of the piece. When the piece is turned out and while still green the cement at the surface is somewhat washed and brushed out exposing the aggregate.

A second shop makes partition units. For these a skeleton of rough lumber like our two-by-fours, story high like a panel of our studding, is nailed up and cross blocked into cells. This is filled with porous concrete for exterior wall lining and party walls between apartments. For other partitions the filling is of plaster. The wood frame remains a part of the panel. This product affords satisfactory insulation for fire, sound, heat and cold, and provides nailing for the inner wall surfacing of the rooms.

A third factory, and the smallest, manufactures slabs of "Lap"; cement with a patented facing, a very hard, marbleized, satin polished surface. "Lap" slabs, story high, are used for bathroom walls and for hall wall surfaces. Polished-face American-made molds are used for these members and the slabs themselves are polished on the face after turning out. Stair strings, treads and risers are also cast in this material, dull-finished. These slabs are carefully stored till placed in the work.

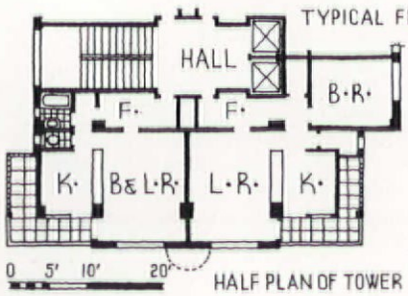
Although much hand labor is used, still the modern factory production idea is closely followed. The handling of pieces in the factory and transportation to the storage courts between buildings is effected in part by hand cars on light tracks, and in part by overhead monorail lines. Both these types of track are readily taken down and re-set further along the site as the work progresses. In



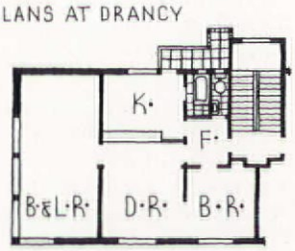
TYPICAL WALL SECTION AT DRANCY

DETAIL OF WALL SLAB SUPPORT

TYPICAL FLOOR PLANS AT DRANCY



HALF PLAN OF TOWER



APARTMENT PLAN IN 3 STORY BLOCK

the courts the various pieces are carefully stacked adjacent to the part of the building where they will be placed.

At Bagneux the floor units are about 12 x 18 in., placed in pairs between light girders, somewhat like a small jointed truss, the pieces bearing two and two against each other at the center. A light board attached to the girders acts as centering till the middle joint is tied and cemented. The finish is a cement floor. At Drancy the members, averaging 11 ft. x 12 in., reach from girder to girder as alternate beams and slabs, coffered and ribbed to make a light section. A special design also keys the beams and slabs together side by side. These pieces are heavier to handle than those at Bagneux but they require no centering. They may be finished with a cement, or a magnesite flooring. Different finishes are used according to the rent scale of the dwelling.

Wall slabs are placed vertically in marked departure from the masonry tradition. At Bagneux they rest at the floor on a concrete beam and are in a measure self-supporting. At Drancy hooks are cast in the ends and the slabs are hung on steel wall beams. Joints are pointed with waterproof cement and are minimized as much as possible. The separate lining wall of wood and porous concrete units, like the partitions, rests on the floor and is anchored at the ceiling.

Certain details essential to living comfort, and others dear to the heart of the French housekeeper, make special and rather difficult assemblies; balconies, laundry-drying rooms with pierced screens, ventilated food safes, louver blinds for windows.

For the inside wall finish it is planned to use plywood nailed to the wood skeleton of the partition panel unit, with a painted finish. Celotex is to be used for ceilings. Window units come complete with steel frame, sash, and louver blinds moving on tracks into the wall on either side, sliding door fashion. Door assemblies of metal frame, plywood door and hardware also come as a unit. The fact that there is no plastering and that very little cement is needed in setting walls and floors is a very important factor in the progress schedule for it makes possible a close follow-up of final finish after masonry setting.

Electric conduit work and plumbing and heating lines are to a high degree assembled in the distant shop and require the minimum of expert work on the job. Mechanical layouts are of course standardized and repeated for each dwelling. Certain mechanical features are of general interest though they may not be applicable to our conditions. Since the French family does not take to the community bath and laundry so economically used in Germany and Vienna, the modern low cost dwelling plan is likely to provide a combination bath and laundry room in which a special short tub, variously designed, is used for both purposes. The later projects also provide a special sink in the kitchen with a collection chamber and a large waste so that garbage is disposed of directly and the whole waste problem solved by a central drying and incinerating plant.

Electric and gas hot water heaters are used quite generally. At Bagneux hot water is roughed in but not supplied to the tenant except with an individual contract and supplementary charge.

Hot water heat is supplied to all dwellings from a central plant. It also is optional and if used brings a supplementary charge. The amount of radiation furnished is small as the winters are relatively mild and the accepted standard of temperature comfort is around sixty rather than seventy-five degrees.

WELLS BENNETT

PRODUCTS AND PRACTICE Continued on Page 60.

THE BANKERS TRUST BUILDING

is one of America's finest For Air Conditioning Refrigeration

they called on York . . .

Headquarters for Mechanical Cooling

SHREVE, LAMB & HARMON
were the Architects

MEYER, STRONG & JONES,
the Engineers

BAKER SMITH & CO.,
the Heating, Ventilating and Air Conditioning Contractors

AMERICAN BLOWER CORP.,
Manufacturers of Ventilation Equipment

When the Bankers Trust Company wanted the finest and most modern system of Air Conditioning for their main banking floor, York Refrigeration was selected for the job.

Architects, Consulting Engineers, Heating Contractors like the kind of service and cooperation they get from York. York offers a wealth of trained *engineering* skill that is unmatched in the field of Mechanical Cooling. And York manufactures such a wide range and volume of Air Conditioning equipment that it can deliver *engineered* Air Conditioning products for any job, correctly designed and individually fitted . . . no matter what the size or type of building.

York offers a complete *nation-wide* cooperative engineering service in every important center of demand.

YORK ICE MACHINERY CORPORATION, YORK, PENNA.
HEADQUARTERS BRANCHES THROUGHOUT THE WORLD

YORK

Commercial and Industrial Air Conditioning . . . Commercial, Industrial and Institutional Refrigeration . . . Dairy and Ice Cream Plant Equipment

Dental Clinic, University of Minnesota, with floors of Armstrong's Linotile in No. 150 Sienna and No. 124 Algerian Black. Installation of 8100 sq. ft. by Architect C. H. Johnston. Armstrong's Architectural Service Bureau offers complete assistance in the use of resilient floor materials.

HOSPITAL CLEANLINESS *calls for floors like this!*

FOR HOSPITALS—where even the floors have to meet extra-rigid sanitary requirements—more and more architects are specifying Armstrong's Linotile.

Linotile floors are sanitary. The smooth surface of the tightly bonded tiles is easy to keep free of dust and germs. Spilled things wipe right up without leaving a trace or stain. And the resilience of the tiles prevents the formation of unsanitary cracks. Simple daily sweeping and occasional washing and waxing keep Linotile spotless even under the heaviest traffic.

In addition to cleanliness, Linotile offers a combination of other advantages that makes it highly suitable for hospital service. It is quiet and comfortable underfoot. It is colorful. And it is exceptionally durable, being twice as resistant to indentation as battleship linoleum.

Linotile is not expensive to install, and it is economical to maintain. Leading hospitals have found it an attractive, practical floor for private rooms, corridors, wards, and offices. The next time you're working on a hospital job, turn to Sweet's for a complete description of Linotile's advantages. Or write now, on your letterhead, for file-sized "Individuality of Handlaid Floors of Armstrong's Linotile." Armstrong Cork Products Company, Building Materials Division, 1204 State Street, Lancaster, Pennsylvania.

Armstrong's LINOTILE FLOORS

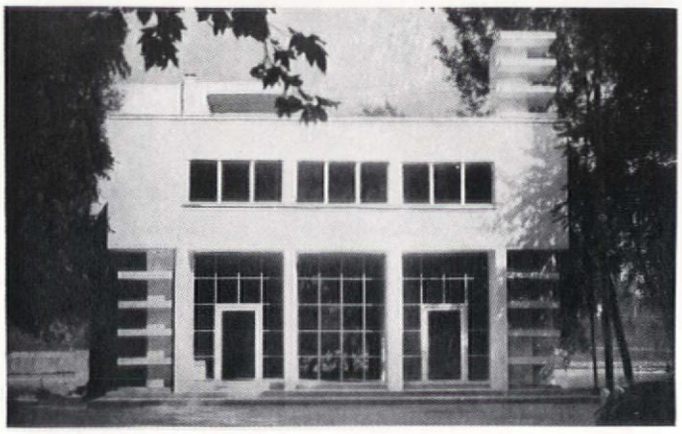
An Italian architect presents the book to end books on modern architecture . . . . Soviet art avoids the revolutionary formula . . . . A treatise on specification writing . . . . A world-wide survey of contemporary industrial architecture.

GLI ELEMENTI DELL'ARCHITETTURA FUNZIONALE, by Alberto Sartoris, Ulrico Hoepli, Milan, Italy. Second Edition, completely revised. 579 pp., 687 illustrations. 9 x 11. 200 lire.

THIS ponderous volume, whose weight is somewhat in excess of five pounds, contains the most impressive collection of modern architecture as yet brought between two covers. If there is anyone who still doubts the vigor of the impulse at the bottom of contemporary efforts to create a new architecture responding to the spiritual and material needs of our age, he would do well to get a copy of this book and study it carefully. There is a natural tendency among those not in sympathy with the modern movement to consider it a passing whim, doomed to swift oblivion even as the "Art Nouveau," and "Jugendstil" of a few decades back. A fad, however, does not continue to develop consistently for twenty years, remaining stronger than ever at the end of that period; nor does it simultaneously win enthusiastic adherents in countries as dissimilar as Argentina, Sweden, and Japan.

This revised edition is divided into two parts: its title, "The Elements of Functional Architecture," refers to seven brief essays in the front of the book; the other 500-odd pages are devoted to what the author calls "A Panoramic Synthesis of Modern Architecture," illustrations of representative buildings in almost 30 countries. In his seven essays, Sartoris defines his terms and states his thesis. Thus, "The new architecture exists to the extent that it interprets and serves man's life as it has been modified by a mechanical civilization and by economic, biological, spiritual, and technical revolutions." A fairly rigorous definition, but, as may be seen from the choice of illustrations, Signor Sartoris is a rather rigorous person. A building may have innumerable windows going around corners, look like a cardboard box, and be raised off the ground on concrete piers and lally columns, and still be ineligible for the title of "true modern architecture," which is not, on the whole, such a bad idea. Nor is a purely functional approach sufficient: spiritual and esthetic qualities are equally important; architecture must express the "new artistic sensibilities of 20th Century man," and realize the new social implications of modern life. Modern architecture is not necessarily built of reenforced concrete; any material that can hold its own with the new ones is satisfactory: wood, travertine, marble, brick—any of these are "modern" materials, each to be used in the way best suited to it. The chief value of Sartoris' book, aside from its importance as the largest collection of modern architecture to be published as one book, lies in the honesty of its purpose: the examples are all of the same breed, and there is no mixture to confuse the issue.

Sartoris has been a confirmed believer in the validity of the modern thesis since the early days when Antonio Sant'Elia electrified the young Italian architects with his pronunciamentos and visions of a new architecture grounded in logic, and since that time he has watched the ranks of the converts multiply a hundredfold. Sartoris is also a purist; nothing except what he considers true modern architecture is admitted in his book. The new Palace of the League of Nations is represented by a photograph — but with a large red slash across the face of it that leaves no doubts as to the author's opinion of it. This elimination of "false modern architecture" restricts the book to what must certainly be called the International Style, since most of the countries with any appreciable amount of recent building are represented. Italy makes a very brave showing, with an array of buildings that are eloquent testimonials of the strides



EXHIBITION BUILDING—ITALY

BANK BUILDING—U.S.A.

that have been made in the past few years. England, somewhat sketchily represented, furnishes some of the best examples in the book. To our own efforts no less than sixteen pages are devoted, including several houses of Neutra, a school by Howe and Lescaze, the Philadelphia Savings Fund building by the same architects, and Frank Lloyd Wright's project for an apartment house in New York. The author's zeal for wide geographic coverage has led to some curious attributions: Persia, for example, is represented by a villa at Neuilly and a two-family house in Vienna, both the work of a gentleman named Guevrekian, and Australia's single representative is Raymond MacGrath, who, while born in Australia, has carried on his practice in London since he left architectural school. While the quality of the examples is remarkably high (if you happen to like this sort of thing) palms go to Scandinavia and Holland. Alvar Aalto's Sanatorium in Finland (ARCH. FORUM, Sept. 1935, p. 180), and the Van Nelle factory at Rotterdam certainly represent an all-time high, and the Dutch housing projects are not far behind. Of the 687 illustrations, most are photographs; some of the presentations are supplemented with plans and other drawings.

(Continued on page 57)

Overwhelming preference proved by recent survey

• People who really know paint know that for durability and beauty, pure white-lead and oil cannot be surpassed. Among architects, for example, it is the overwhelming choice... proved again by a recent survey made by the Forest Products-Better Paint Campaign.

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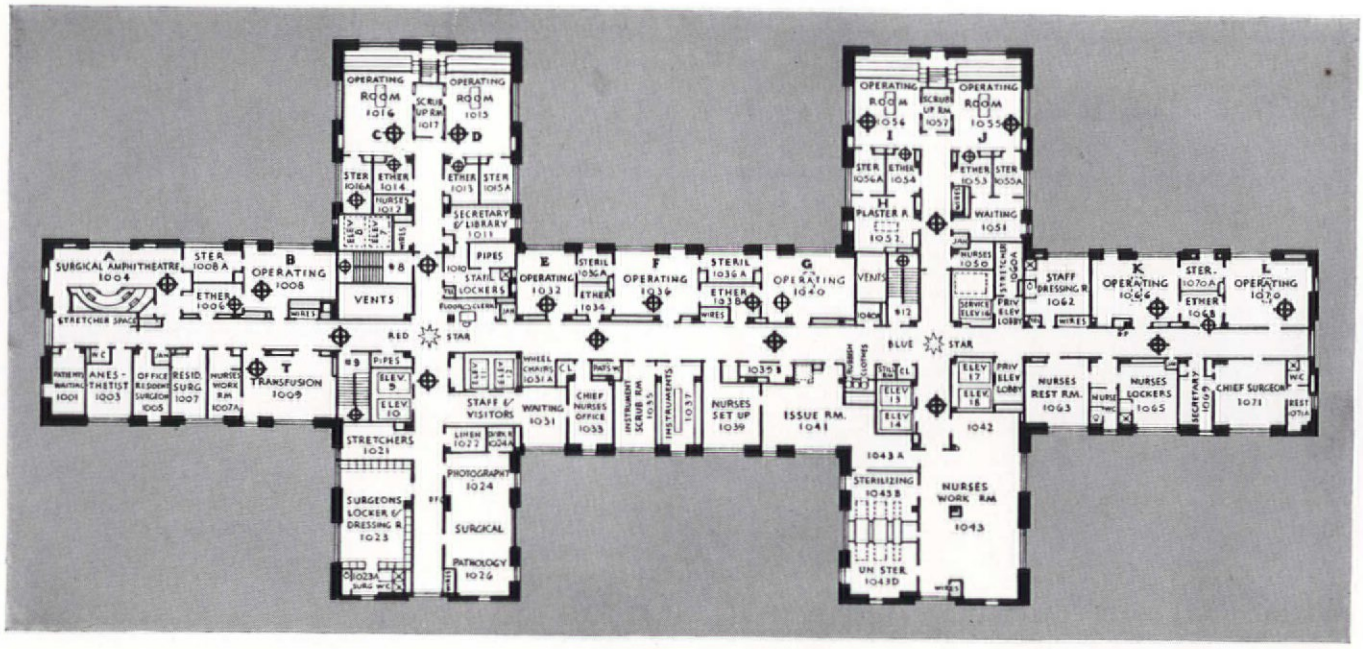

In a hospital, for instance, where would you specify emergency lighting protection?

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Refer to Sweet's Catalogue, Section 27—Page 11, 1936 Edition

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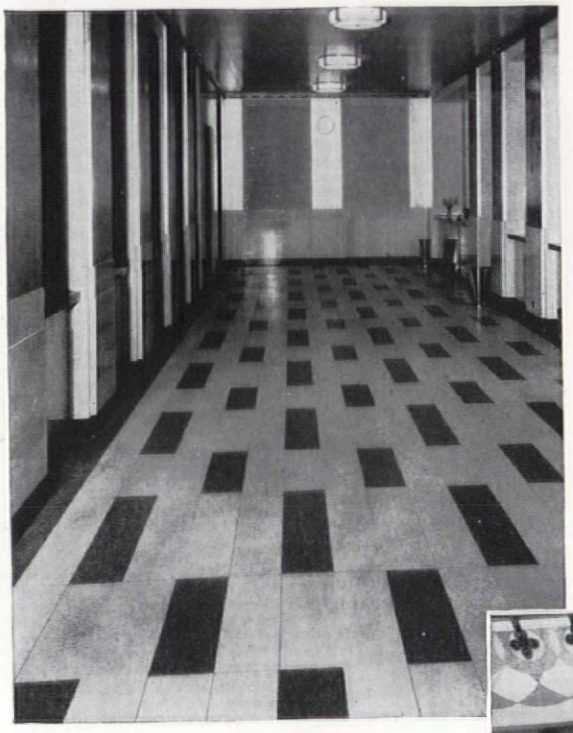

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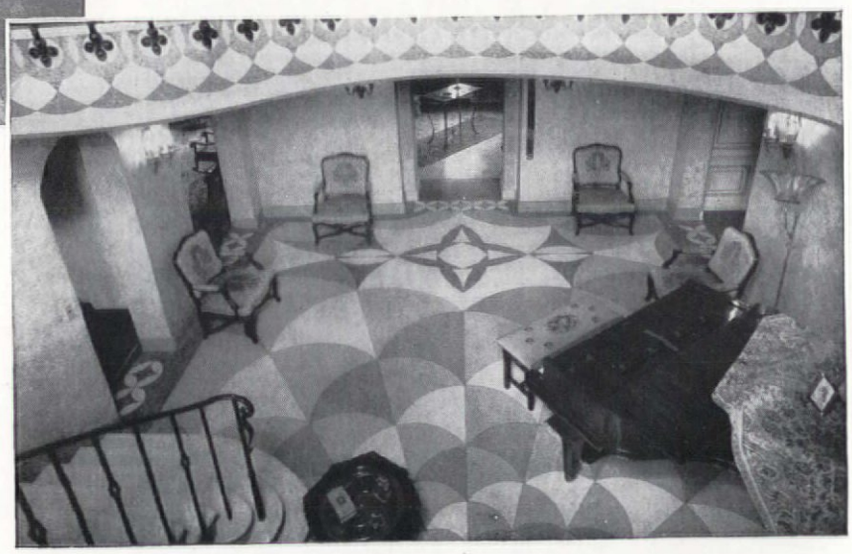

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THE Portland Cement Association believes that the trend toward permanent firesafe houses will continue because of its economic soundness. True low costs are obtainable only through permanence.

Growing acceptance of this idea offers the architectural profession the greatest opportunity it has ever had in the housing field. When people think of their new home as something that will last for generations, problems of layout, style and detail take on new importance. The permanent house needs the touch of the architect if its beauty is to survive current modes and last with the physical structure.

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toward better construction will be lasting if strongly influenced by the architectural profession.

There have been numerous recent developments in the use of concrete for houses. The competitor need not confine himself to more familiar types of construction, but is welcome to use any sound design for concrete floors, walls or roofs. An extra stimulus is thus provided for refreshing the knowledge of this important building material.

It is hoped that the results of this competition will show the home buyer in modest circumstances that the architecturally trained man can solve his small house problem from the practical as well as the esthetic point of view.

The Portland Cement Association is emphatically not in the business of selling or furnishing plans. While the Association intends to publicize the designs widely, those who inquire for detailed plans will be referred to the architects who furnished the designs.

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Edward S. Sibbert, *Architect*

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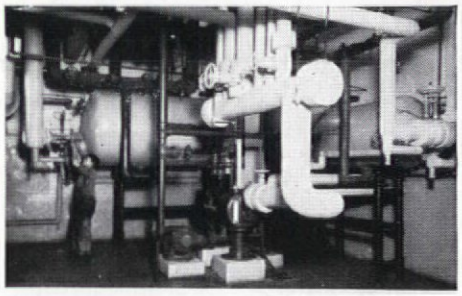

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HOUSING:

GOVERNMENT AID OR PRIVATE ENTERPRISE?

A SURVEY REPORTED JOINTLY BY THE AMERICAN CITY AND THE ARCHITECTURAL FORUM

BEFORE the days of Roosevelt II, there was little indication that government—Federal, State or local—would become a potent factor in the housing business. But today, Government-financed housing is a fact. And however far present Government housing falls short of being low cost housing, its mere existence is a talisman for tomorrow.

After four years in the news and untold man-hours of research, chart-making and debate, two unchallenged facts about low cost housing have poked their way out from the fog of conflicting opinion. Accordingly, whatever else remains to be argued about the ultimate solution, few voices will now deny that the U. S. *faces* a physical shortage of housing for families in the lower income groups, or that low cost shelter now available is sub-standard.

Even if every one of today's unfit and obsolete buildings were left standing and occupied, an enormous amount of housing will have to be supplied during the next fifteen or twenty years. In 1945 the U. S. will contain 7,000,000 more families than in 1930, most of whom will be living on small incomes. These new families will have to be housed. For most of them the housing will have to be low cost.

Low cost housing is admittedly a loose term which has never been defined for general purposes, probably because it is not susceptible to such definition. But it can roughly be taken to mean adequate housing at a price the lower income groups can afford to pay. So defined, low cost housing remains to date one of the major failures of both private enterprise and Government activity—for both have tried their hand and low cost housing is still little more than a glint in the sociologist's eye.

Today with a market for millions of low cost housing units in the offing, the question of who will supply them is of more than academic interest.

How far in the future Government low cost housing lies depends on the fate of two bills presented to Congress. Both the Wagner Bill in the Senate (ARCH. FORUM, Jan., 1936) and the Ellenbogen Bill in the House (ARCH. FORUM, Jan., 1936) would put the U. S. Government in the low cost housing business. But their ways and means and ultimate consequences are different.

Granting that legislation based on either bill is enacted and fares well with the Supreme Court, private enterprise would not thereby be excluded from entering the low cost housing business in competition with the Government. But, aside from the technological difficulties, private initiative hesitates today because of uncertainty over the nature of possible Government competition.

To help determine what direction Government low cost housing is likely to take, THE AMERICAN CITY in collaboration with THE ARCHITECTURAL FORUM quizzed 500 individuals who represent the most influential and informed opinion in the field of low cost housing in the United States.

One hundred thirty-seven replied, stated their preference between Government and private initiative, gave detailed opinion on the best ways and means for Government aid. A facsimile of the questionnaire as submitted together with returns will be found on the two following pages and the complete list of individuals answering appears as Appendix, page 87.

Since the answers received were nearly unanimously in favor of Government aid (133 to 4), it is significant to see how the suggested types of governmental activity line up in comparison with the two low cost housing bills now awaiting Congressional action.

The Ellenbogen Bill provides for the creation within the Department of Interior of a United States Housing Authority with wide powers, an appropriation for organization purposes, and the authority to issue its own bonds up to $1,000,000,000. Under the Wagner Bill the existing Housing Division of the Public Works Administration would be transferred to the Department of the Interior with a definite appropriation. The essential differences lie in administration and finance. Shall policy be determined by a single cabinet officer or by an administrative board? Shall financing be dependent upon direct Congressional appropriation of Federal moneys, or upon the sale of bonds backed by Treasury guarantee?

Private low cost housing enterprise will be seriously affected by the answers to these two questions. And since THE AMERICAN CITY-ARCHITECTURAL FORUM Survey presents a cross section of the most influential low cost housing thought in America, the building industry can look there to find a reasonably reliable clue to the direction of these answers.

Congress may pass either of these bills, or neither. But in the long run, legislative attempts to solve the low cost housing problem will probably be most effectively influenced by the type of thinking expressed on pages 82-86. But — there is always a but — not even housing is too big to be chucked into the pork barrel.

QUESTIONNAIRE FACSIMILE WITH NUMERICAL TABULATION OF ANSWERS

Page 1

If you believe that it would be in the public interest for the 1936 session of Congress to make available further governmental aid either to low-cost housing, or to slum reclamation, or to both, please indicate your ideas as to the purpose and methods of such aid by checking one or more entries under each head in the following list:

(Please read first John Ihlder's statement, on page 4, on the distinction between slum reclamation and the provision of low-cost housing, as those terms are here used.)

1. Purposes

101 To provide adequate low-cost housing, whether on sites to be cleared or on vacant land

90 To reclaim slums or blighted areas for uses that will most benefit the neighborhood or the community as a whole

57 To develop new satellite or "greenbelt" communities

2. Form of Federal Agency

33 A permanent Housing Division to be created in an existing Federal Department, and to be financed by Congressional appropriations

85 A United States Housing Authority, to be created as an agency of the Federal Government, with preliminary financing by Congress and with the right to issue its own bonds up to a specified amount

92 As an important feature of either of the foregoing, a strong and adequately financed central bureau for research and dissemination of information in the field of housing and community land policies

3. Financing of Projects

34 Wholly by the Federal Government

68 Partly by the Federal Government and partly by state and/or local governments

70 Partly by some governmental agency and partly by private capital

4. Apportionment of Federal Grants or Loans

6 By the President

80 By a Federal housing agency

23 By Act of Congress, apportionment to be among all of the states on the basis of population or otherwise

23 Partly by Congress and partly by Presidential or Federal agency discretion

Page 2

5. Selection of Sites and Approval of Plans

40 By a Federal agency

92 By state or local agencies

6. Construction

26 By a Federal agency

11 By state or municipal governments

71 By state or local housing authorities

73 By private enterprise, under contract from or subject to supervision by some public agency

7. Operation

20 By a Federal agency

9 By state or local governments

86 By state or local governmental housing authorities

56 By private management, where legally possible, under lease from or supervision by the governmental unit which had aided in financing construction

52 By tenant cooperatives

8. Form of Subsidy, if Any

30 Outright grants of Federal funds

80 Combined loans and grants of Federal funds

65 Loans alone, at less than commercial rates, but on a basis that will protect the governmental lending agency from incurring a deficit; said loans to be made to:

- 48 Public housing bodies
- 48 Cooperatives or other non-profit-making, non-governmental groups
- 49 Limited-dividend housing corporations

24 Renting publicly financed housing at a loss only if tenants cannot be secured at rents which would pay an economic return

57 Writing down the cost of a site when that cost, because of the expense of clearing it of slum buildings, etc., is too high for its proposed use

47 Governmental insurance of loans made by private banking institutions

16 Tax exemption on both land and buildings

36 Tax exemption on buildings, but not on the land

37 No subsidy through grants or tax reduction on real estate, but financial aid by local relief agencies to individual families unable otherwise to pay an economic rent, similar to the aid given to families unable to buy food or clothing

83 Provision at public expense in large-scale, low-rent housing projects, of facilities and supervision for outdoor and indoor recreation, kindergartens, etc.

9. Private Initiative

Instead of any of the alternatives listed above, do you believe that the providing of adequate housing for the lower income groups ought to be left wholly in the domain of private enterprise, unaided by any form of governmental subsidy or loan, direct or insured?

4 If you answer "yes" to the preceding question, have you any evidence that private enterprise:

3 (a) Has provided such housing of satisfactory standard?

2 (b) Will provide such housing of satisfactory standard?

(It would be appreciated if you can accompany "yes" answers to either of the foregoing questions with some of the evidence.)

The foregoing blank as checked represents the personal opinion of

Name_____

Title or occupation_____

Address_____

Date_____

(If you have any solution of problems of slum reclamation or of low-cost housing other than indicated in the foregoing list, please outline your plan on the back of this questionnaire or on a separate sheet.)

SLUM RECLAMATION AND THE PROVISION OF LOW-COST HOUSING

By John Ihlder
Washington, D. C.

Slum reclamation and the provision of low-cost housing are two distinct things which may or may not involve an identical site.

1. Slum reclamation involves changing the use of an area so that it will be converted from a community liability to a community asset. Its new use should be the one that will be most beneficial to the neighborhood and to the community as a whole. This may be commercial, industrial, recreational or residential. If residential, it may be either high-cost or low-cost.
2. Provision of low-cost housing involves securing low-cost sites that are accessible to employment. Such sites may or may not be those of former slums.

It is to be remembered that a housing program for any community must include three forms of activity:

(a) Demolition of unfit dwellings. Unfit dwellings are likely to be occupied as long as they stand. They are unfair competitors of fit dwellings. Therefore, slum reclamation is an essential part of a housing program. Along with slum reclamation goes demolition, under the police power, of individual buildings that are structurally unsafe or that are so insanitary as to be unfit for human habitation.

(b) Repair and proper maintenance of dwellings that are fit or are worth making fit for habitation, unless repair would impede the clearance and reclamation of a slum or blighted area in which such dwellings happen to be located.

(c) Erection of new dwellings to prevent a housing shortage, and to assure good housing for all economic groups. These new dwellings should be so distributed as to location, type (one-family, multi-family), size and cost, as to meet the needs of the community.

In addition to the numerical summary of opinion indicated in script on the facsimile questionnaire (pp. 82 and 83) here, in amplification, are presented pertinent comments, selected as typical.

1. PURPOSES

I do not believe that a housing program should scatter its "energies" in many directions. In my opinion it should confine its chief activity to low rental housing. This objective is direct and simple and is not complicated by broader issues involved in schemes for reclamation and satellite communities.——*Asher Achinstein, Assistant Secretary, State Board of Housing, New York City.*

My conception of a proper pattern for a city is that it should retain and improve as much as possible all existing residential areas. To expand simply from the center outwards with more business and more industry would ultimately mean, if it were carried out, that all of Boston would be used for business and industry, and the people would have to live elsewhere. This is not at all likely to happen. In the meantime, in order to tear down our slums and create a satisfactory condition gives us such an expensive base that it will prove difficult. Almost invariably the rentals will be beyond the reach of the workers and people who can pay the rentals on an economic base will refuse to live in such areas. I do not think it possible to do the work on a scale large enough to create at the centers high-grade possibilities.——*E. T. Hartman, State Consultant on Planning, Department of Public Welfare, Boston, Mass.*

Slum clearance and low cost housing are not necessarily identical and emphasis on slum clearance may retard or prevent low cost housing.

A public housing program does not mean housing built at Government expense, State and local responsibility should be encouraged. Loans from the Government can be made to the local authorities.

Though decentralization may be desired, such as the garden cities of Europe, it cannot be successfully put over without an educational program along housing lines.

In case of slum clearance, the manager should work with the proper authorities in arrangement for rehousing the displaced households. This has been a question that everyone asks and no one as yet has satisfactorily answered.

The English plan of slum clearance tears down all unfit dwellings as no remuneration to the owner. Extra taxes should be charged for unfit, dangerous dwellings.

Some means must be secured to set standards of living before the public will take kindly to a program of slum clearance. ——*Miss Louise Morel, Chairman Public Welfare KFWC, Louisville, Ky.*

I think the primary purpose of such a program should be to reclaim the slums as indicated; second, to develop new satellite communities, and third, to provide adequate low-rental housing, the latter to be done in times of emergency in case of housing shortage or where there is an economic situation that needs correction, but with outside governmental aid.——*Joseph P. Tufts, Executive Director, Pittsburgh Housing Association.*

I believe that the cost of purchase and demolition of slum property is purely a local responsibility and should be borne solely by the community which, through lack of restrictive and regulatory legislation, allowed such conditions to develop. I see no justification for the Federal Government *contributing* money raised from *all* the taxpayers, to improve conditions for a *few*.——*Lawrence V. Smith, M. E., Secretary, State Board of Housing, Wilmington, Del.*

Publicly controlled housing must be separated from slum clearance in the public mind. Both are necessary but their union has defeated both.——*Charles Dana Loomis, Architect, Baltimore, Md.*

There should be some provision for a systematic and constant demolition of the unfit structures at the bottom of the scale, perhaps, as in England, by public health office condemnation.——*Henry H. Saylor, Editor of Architecture, N. Y. C.*

I am more especially opposed to the clearing up of present slums by the purchase of the land and buildings in these slums and rebuilding them. If these districts and these buildings are uninhabitable, then let officials of stamina see that they are condemned and the buildings torn down. That is clearly within the police power. Do that and those who own the ground will of necessity rebuild to some proper use, either for improved habitations or for other purposes. But let us waste no sympathy on the man who for years and years has rented uninhabitable tenements to humans at profitable prices and has put nothing back in the property to replace it and keep it habitable. He has profited so long from the life blood of the people that he is deserving of no consideration whatever.——*John J. Wagner, Realtor, Cedar Rapids, Ia.*

To make provision for low cost housing is a many-sided problem. It will vary, moreover, from community to community and from year to year. We have had virtually no experience in this country which can serve as a reliable guide to action. In view of these considerations, I believe it would be unwise now to attempt any greater choice among the many alternatives posed in this questionnaire than the elimination of some few proposals which experience obtained in other fields indicates as undesirable. In an emergency measure it may be well to select a single line and hew to it. In a long-range program, a variety of procedures should be rendered available and sufficient flexibility accorded to render their employment possible where and when the immediate situation indicates their use.——*David F. Cavers, Professor of Law, Duke University, Durham, N. C.*

2. FORM OF FEDERAL AGENCY

I have had difficulty in choosing between the first two alternatives as choice must depend mainly upon the powers and duties of each agency. I presume that the first alternative has the Wagner bill in mind and the second the Ellenbogen bill. I believe the former leaves too much in the hands of the local agencies and the latter places too much responsibility in the hands of the Federal Housing Authority. If the Wagner bill could be strengthened along the lines of greater supervision over local agencies and also include loans to limited dividend companies there would be little to choose from in the set-up of the Federal Housing Division vs. the Federal Housing Authority.——*Asher Achinstein*

3. FINANCING OF PROJECTS

The questions on the first page of your questionnaire are best answered, as far as I am concerned, by saying that Housing is and should be a State function.

The sole function of the Federal Government should be confined to the supplying of credit to enable communities to clear their own slums and rehabilitate their blighted areas under a State Planning Authority, and this credit should be devoted exclusively to the housing of people who cannot pay an economic rent, and will constitute a part of the subsidy without which these people cannot be adequately housed.

People who can pay an economic rent (those with incomes above $1,500 a year) should be housed exclusively by private initiative. People with incomes between $1,500 and $3,000 a year can be privately housed by community building and community financing.——*Ross F. Tucker, Professor, Massachusetts Institute of Technology, Cambridge, Mass.*

I do not believe in the complete financing of any projects by the Federal Govern-

ment. I believe that the Federal Housing Act self-sustaining insurance fund, available to all in conjunction with local private financing institutions, is sufficient and should mark the extreme limits of Government participation in actual housing.——*Walter Kruesi, Secretary Brooklyn Garden Apartments, Inc.*

Few State and local governments are in a position to finance housing developments. However, I believe that it is sound public policy to encourage local and governmental financing. When local governmental agencies show a disposition partly to finance housing developments, special terms should be granted by the Federal agency. Nor should a long range Federal program shut the door to the financing of limited dividend companies by insurance companies and savings banks.——*Asher Achinstein*

4. APPORTIONMENT OF FEDERAL GRANTS OR LOANS

The preference which I have indicated of having the apportionment made by act of Congress on the basis of population should be taken only as I have indicated in the questionnaire from which, you will note, I have stricken out the words "or otherwise." If these words were included it would permit of "pork barrel" legislation which, from my point of view, would be the very worst possible method of apportionment; whereas, I believe that if the apportionment were made strictly on the basis of population it would eliminate favoritism on the part either of Congress or the Administration.——*Louis Justement, AIA, Architect, Washington, D. C.*

I am opposed to any Federal grant or loan as tending to destroy the States' rights and responsibilities. If I had to choose between the four apportioning agencies, I would make it the second and limit it strictly to a self-liquidating loan basis. ——*Walter Kruesi*

5. SELECTION OF SITES AND APPROVAL OF PLANS

As to the selection of sites and approval of plans, these should be worked out by the local agency, such as a housing authority, but should be checked by the Federal agency involved in lending or granting the money. The Federal agency should not try to impose plans on the local community, but should have standard-setting power. ——*Joseph P. Tufts*

Although I have expressed approval of governmental housing, it must be *planned housing* after adequate study by local planning officials. It must not be "planless" housing, not housing which conflicts with local plans.——*Walter H. Blucher, Executive Director, American Society of Planning Officials*

6. CONSTRUCTION

I do not believe in the construction of any housing for civilians by any Federal agency, or by any State, though I regard this as a subject to be determined strictly by each State. I would permit local housing authorities to carry out construction and, of course, permit contracts to private construction enterprises.——*Walter Kruesi*

7. OPERATION

MANAGEMENT BY A REAL ESTATE COMPANY:

Pro: 1) A considerable amount of technical and real estate experience has been accumulated.
2) The management problems will be handled on a strictly business basis with dollars and cents the main consideration and all other aspects subordinate.
3) The element of politics is removed.
Con: 1) The real estate men have given very little attention to housing accommodations for the low income group.
2) Low rental housing is not only a matter of providing decent accommodations but also of educating tenants to respond to the new environment. As the great majority of wage earners have children, the ability to handle a large number of them together is also an important consideration.
3) The manager will face a number of social problems which he does not know how to handle.
4) Though the private concern might charge a reasonable figure for management there are a number of ways for real estate people to earn extra money by creating dummy corporations for repairs and charging the development exorbitant prices.
5) Selection of tenants would not be an important factor. The main consideration will be to rent them regardless of who will occupy the apartments.

MANAGEMENT BY A GOVERNMENT AGENCY:

Pro: 1) Decisions as to policies are made directly by the agency which allows for greater adjustment. For instance, if the Government decides that the rental in the development is too high and the economic group for which the project is intended is not reached, it can adjust its interest rate more readily.
2) Experience accumulated in connection with management will go to the agency.
3) The part of the cost of management that would be profit for the real estate man would go to the public.
4) Housing projects today, at least in urban centers, will be on a large scale. Therefore, a large number of other problems would have to be solved in connection with housing, such as public utilities, schools, recreation, etc. It would be simpler for one Government agency to deal with another than a private real estate man to deal with a Government agency.
Con: 1) The Government in power might use housing for political benefits.
2) Waste and inefficiency because of bureaucracy.

MANAGEMENT BY A NON-PROFIT SEMI-PUBLIC GROUP:

A non-profit making group composed of representatives of the Government, public-spirited real estate men and the public (represented by social workers, students of housing, etc., who would serve as the management policy making group.)
Pro: 1) The experience accumulated by the real estate profession would be brought in.
2) The Government could not very well use housing for political purposes as the management group would constitute persons of various political leanings.——*Abraham Goldfeld, Executive Director, Fred L. Lavanburg Foundation, New York City*

I think we should study very carefully the new housing act passed in Great Britain by which, as far as possible, the various problems are handled through local agencies. I am strong in my belief that we attempt to do too much direct by Federal intervention and that it tends to raise, through red tape and the necessity for passing everything through the bottle neck at Washington, complaints due to change of plans, to artificial restrictions and to delays. We need, therefore, to use local agencies more and to furnish them grants in aid as far as possible by Federal agencies. ——*B. H. Kizer, Chairman Washington Planning Council, Spokane, Wash.*

8. FORM OF SUBSIDY

The form of subsidy and the necessity for a subsidy will depend in large measure on what the primary aim of the housing program is. If the primary aim is the provision of new, low cost housing for the lowest income groups, a subsidy will be necessary. If the primary aim is the intelligent rebuilding of our cities, and the country is unable or unwilling to resort to huge subsidies, we may proceed as follows: The poorest tenants of existing housing which is destroyed will move into housing which has been vacated by the tenants in a higher wage group, who will occupy the new housing. For this type of program a great deal can be accomplished through the expansion of the present provisions of the FHA to include the assembly of property through eminent domain and direct financing through Government bond issues at a rate of interest not to exceed 3 per cent. The excess cost of the ground will be largely, if not entirely offset by the lower interest rate, with a minimum of interference with the general scale of rents and property values. When the increased cost

of the ground, due to the presence of existing buildings, cannot be overcome without direct subsidy, I would favor the deliberate writing down of the cost of the site to a point which would make a normal investment possible.——*Louis Justement*

Rent subsidy by national and local government provided under a system of differential rentals for families unable to pay an economic rent.——*L. Segoe, Planning Consultant*

Direct subsidies rather than indirect or hidden ones.——*Charles Ascher, Secretary Public Administration Clearing House.*

I believe that loans and grants should be made not only to public housing bodies, but also to cooperatives provided they are organized for the low income groups. . . .
I would tax exempt projects on land and building, but would charge them for municipal services obtained.
I believe that we need two subsidies—one, in the form of grants and loans to provide low cost housing and another, to supplement incomes of individual families in order to make it possible for them to meet the rent. For instance, we might get $8 a room a month houses, but then what is to be done with people who can pay only $5 or $7. Here you would require supplementation.
I note that you have not raised the question as to how to obtain funds for housing. Should these funds be borrowed or included in the budget of the U. S. A. Government? If the Government has to borrow money in order to make grants, how is it to repay these loans?——*Abraham Goldfeld*

It is my conviction that if the Federal Government, which finds itself able to borrow at extremely low rates of interest, had offered funds at these rates for new housing and slum clearance projects subject to Federal approval as to plans and subsequent management, there would have been a tremendous "private" interest in housing. Thousands of acres of slums would have been cleared and thousands of men would have been employed on useful construction projects in all parts of the country if property owners, in this emergency period, had been offered Federal loans for housing at 1½ and 2 per cent. Under such a program Federal funds would have gone out largely as loans, to be repaid later. This would have changed the complexion of the national debt.
The experience of a revival, through private employment, would have shown the public advantages accruing from a low interest rate. This would have been a step forward in the campaign to show the evils of high interest rates. Low interest is a form of distributing wealth and one which the Government could well employ along with methods of taxation having social motives.——*L. Deming Tilton, Consultant, California State Planning Board, Santa Barbara, Calif.*

Tax exemption seems to me the least desirable form of subsidy, but may prove in some cases the only way in which local financial assistance is possible. I do not think it should be either insisted upon or barred out.——*Edith Elmer Wood, Cape May, N. J.*

My answers endorse temporary expedients. If the artificial scarcity of land were relieved by the taxation of land values and exemption of all improvements from taxation, the housing problem would settle itself. Private enterprise would then occupy the field successfully and the people be comfortably housed at reasonable rents. ——*Franklin Wentworth, Boston, Mass.*

Federal or State Land Banks are needed to properly supply credit to the real estate field. Many of our problems would solve themselves with a scientific plan for financing of real estate.——*Douglas L. Elliman, Real Estate Agent and Broker, New York City*

9. PRIVATE INITIATIVE

Under "private initiative" my answer to the first paragraph is yes and no.
To the second paragraph "A"—it is my belief that private enterprise has promoted such housing of satisfactory standard and has a greater percentage of satisfactory performance than almost any other industry has in respect to its seeming problems. My answer to "B" is—private enterprise will continue to provide such housing of satisfactory standard and will improve its performance if assisted by national, State or municipal research and planning. Any direct participation by the Government in providing such housing will discourage private initiative to such a point that the original purpose will be defeated. ——*W. H. Ballard, W. H. Ballard Company, Boston, Mass.*

I believe that in any discussion of low cost housing consideration must first be given to the incomes of those families which are to be housed. Cast-off houses of the "middle class" do not solve the housing problem of our lowest income group for two obvious reasons: they either rent at levels out of reach of annual incomes of less than $1,000, or they are unfit for habitation, or both. While the so-called middle class manages somehow "to get along," it pays altogether too large a proportion of its income for rent, and generally gets second-rate housing in return. . . .
"Low rent housing for poor": Housing for that portion of the population which will never be able to afford decent housing based upon present factors calculated in rent, i.e., land and building costs, profits, interest rates, taxes, depreciation, maintenance, losses on vacancies or arrears, etc., for which use of the power of eminent domain by the Federal, State, or local government may be necessary. This is a public welfare problem and its only hope for solution lies in what some people call "government interference with business." It represents the housing problem for about 21½ per cent of all American families having annual incomes of less than $1,000. This income figure is likewise for our most prosperous year, 1929. . . . ——*Douglas V. Cannon, Economics and Statistics Division, FHA*

I am entirely opposed to any further extension of paternalism on the part of State, Federal or city governments and that if buildings are not suitable for human habitation, there are suitable laws on the books today to condemn such buildings or to provide for their proper maintenance.
The more the Government interferes with private business, the more troubles we will have. The law of supply and demand is still operating.
I have, therefore, no interest in filling out the questionnaire as this covers my ideas adequately and I trust that we will soon discontinue our dependence on any form of Federal help as I believe that the people should support the Government and not the Government the people.——*Lawrence B. Elliman, Pease & Elliman, Inc., New York City.*

I believe that a successful housing policy must be based on the American principle of employing private enterprise, assisted by a minimum amount of Government cooperation, and operating under a sound law that protects the public interest.
The ten years' success of the New York State Board of Housing in large measure illustrates this principle. The chief need still to be provided for is a reorganization of the system of building finance so as to supply adequate long-term capital at the necessary low rates (4 per cent or less) for housing operations. Our mortgage machinery, in particular, is to a certain extent antiquated and was not originally designed for housing.
Recent experience with Government housing shows, as might have been expected, that this policy cannot be fitted into the capitalist system. You cannot mix oil and water. Government housing is pure socialism. The practical effect of Government housing is to serve only a very limited economic class, on an uneconomic basis, housing them at a loss—a loss so great that President Roosevelt has recently stated that the Government cannot afford it.
Furthermore, it can be shown that the Government policy, contrary to the plausible claims of its supporters, has had the effect of blocking private enterprise in housing.——*John Taylor Boyd, Jr., Architect and City Planner, New York City*

THE AMERICAN CITY-ARCHITECTURAL FORUM Survey leaves no doubt that expert opinion, as represented, prefers the theories expressed in the Ellenbogen Bill to those originally sponsored by Senator Wagner.

But if these same housing experts were given a free hand to write their own low cost housing legislation their bill would pattern itself after none now written, would probably establish a United States Housing Authority with the right to issue bonds and the duty to establish a bureau for research and public enlightenment.

This USHA of theirs would be principally concerned with providing adequate low cost housing, would also undertake slum clearance and "greenbelt" communities. Federal funds would not be the sole source of building money. State and local governments as well as private capital would share the ante as recipients of Federal loans.

While this hypothetical USHA would not operate with Federal money alone, it would exercise control over allotment of all its funds, whether as grants or as loans. Reserving veto power, it would delegate selection of site and approval of plans to State or local agencies. Actual construction would be left to private enterprise, but operation of the completed project would be controlled by State or local housing agencies, either directly or possibly through private management.

Under this USHA private capital could compete in the low cost housing business on a limited dividend basis. Federal funds would assist private enterprise on the one hand and compete with private enterprise on the other through equal or greater assistance to State and local governments. But Government competition would not have the advantage of tax exemption.

So would run the gist of the housing expert's hypothetical bill. But quite different housing legislation would result if the formation of the bill were left solely to any one of the groups represented by the individuals listed in the Appendix. For instance, realty and construction opinion unanimously placed all major activities in the hands of private enterprise, confined the Federal Government to loans for limited dividend corporations, insurance of mortgages, tax exemption for new buildings, and general supervision, left State and local agencies unaided. At the other extreme, planners and technicians favored a greater burden on the Federal tax roll than provided in the hypothetical bill, more public less private enterprise.

Now a survey based on a 27 per cent questionnaire return is not intended to establish fast conclusions in a notoriously disputed field of thought. Nor is a hypothetical piece of legislation based on that questionnaire intended as an ideal model. Like the tariff, low cost housing is probably destined to remain controversial. If a symposium of the opinion of those now most concerned with the subject serves any constructive purpose, it is in more sharply delineating the shapes obscured in the fog.

APPENDIX. List of individuals who returned answers:

Asher Achinstein, Assistant Secretary, New York State Board of Housing. H. W. Alexander, Secretary, City Planning Commission, Louisville, Ky. Walter Wright Alley, Executive Director, Municipal Housing Commission, Los Angeles. Carol Aronovici, Consultant on Housing & Town Planning, New York City. Charles S. Ascher, Secretary, Public Administration Clearing House, Chicago. Tracy B. Augur, Town Planner, Knoxville, Tenn. Catherine K. Bauer, Executive Secretary, Labor Housing Conference, Washington, D. C. Charles A. Beard, Teacher. Charles B. Bennett, City Planning Engineer, Milwaukee. Grant A. Benson, Chairman, Omaha Housing Authority. Mrs. J. C. Bernheim, Vice President, United Neighborhood Houses, New York City. Charles Sumner Bird, Jr., Russell V. Black, Director, New Jersey State Planning Board. Walter H. Blucher, Executive Director, American Society of Planning Officials. George A. Boehm, Architect. John Taylor Boyd, Jr., Architect and City Planner. Edwin Burdell, Professor of Sociology, M.I.T. Douglas V. Cannon, Economic and Statistics Division, FHA. David F. Cavers, Professor of Law, Duke University. C. M. Chuckrow, President, Fred F. French Co., New York City. Henry S. Churchill, Architect; Housing Study Guild, New York City. Evans Clark, Economic Adviser, New York City Housing Authority. Arthur Comey, Consulting Planner, Cambridge, Mass. David Coyle, Consulting Engineer. Jacob Crane, Planning Engineer. J. Earl Davies, Associate Professor of Education, Adams State Teachers College, Alamosa, Colo. Michael M. Davis, Director, Julius Rosenwald Fund; Executive Committee, National Conference of Social Work. John Dewey, Educator. Myron D. Downs, Engineer, City Planning Commission, Cincinnati. Mrs. Louis I. Dublin, Chairman, Committee on Law Enforcement, Housing Section, Welfare Council, New York City. Andrew Eken, President, Starrett Corporation. Douglas Elliman, Realtor. Haven Emerson, M.D., Professor Public Health Practice, Columbia University. H. P. Fairchild, Teacher. Joseph H. Fink, Secretary, Housing Committee, Brooklyn Bureau of Charities. Miles R. Frisbie, Executive Director, Municipal Housing Authority of Schenectady. John Gaus, Professor of Political Science, University of Wisconsin. Arthur C. Gillette, Vice President, New Jersey Housing League. Gerald Gimre, Secretary, Nashville Housing Committee. Abraham Goldfeld, Executive Director, Lavanburg Foundation. William R. Greeley, Architect. Sergei N. Grimm, Executive Director and Secretary, Syracuse Housing Authority. Frederick L. Guggenheimer, Executive Director, City Affairs Committee, New York City. Bolton Hall, Land Holder. Mrs. Helen Hanning, Chairman Housing Division, Community Council of the City of New York. Joseph P. Harris, Director of Research, Social Science Research Council. Edward T. Hartman, State Consultant on Planning, Mass. L. A. Henny, Planning Engineer, Arkansas State Planning Board. Wayne D. Heydecker, Planning Consultant. Mark Hodo, Director, National Association of Real Estate Boards. William L. Horn, Chairman, Housing Authority of City of Port Jervis. H. V. Hubbard, City Planner. John Ihlder, Executive, Alley Dwelling Authority, Washington, D. C. Stanley M. Isaacs, Lawyer and Real Estate Investor. Edward L. Israel, Vice President, National Public Housing Conference, Baltimore. Darwin James, Banker. C. E. Jenks, Secretary, Chamber of Commerce, East St. Louis: Secretary, St. Clair County Authority. Howard Johnson, Social Service Representative, State Housing Authority, New Jersey. Robert Taylor Jones, Architect. Louis Justement, Architect. H. Kallen, Professor, New School for Social Research, New York City. Howard A. Kelly, Executive Secretary, Buffalo Housing Authority. B. H. Kizer, Chairman, Washington State Planning Council. Robert D. Kohn, Architect. Walter Kruesi, Consulting Economist on Housing: Secretary, Brooklyn Garden Apartments, Inc. Gladys A. LaFetra, Research Worker, Housing and Property Section, E.R.B. of New York City. W. S. Landes, President, New Jersey Housing League. W. S. Lawrence, Secretary, Metropolitan Housing Authority, Warren, Ohio. B. F. Leavenworth, Statistician. Leonard Logan, Vice Chairman, Oklahoma State Planning Board. Charles Dana Loomis, Architect, Maryland Emergency Housing and Park Commission. Milton Lowenthal, Associate Economics Analyst, Suburban Resettlement Division. Harry L. Lurie, Executive Committee, National Conference of Social Work. M. J. Mackler, Chairman, Tampa Municipal Housing Board. Walter B. Mahony, Lawyer. Leifur Magnusson, International Labor Organization. Bleecker Marquette, Executive Secretary, Better Housing League, Cincinnati. Benjamin Marsh, Executive Secretary, People's Lobby, Washington. Albert Mayer, Architect. T. T. McCrosky, City Planning Director, Yonkers, N. Y. Earl O. Mills, Planning Consultant, Arkansas State Planning Board. Joseph Milner, Real Estate Adviser, New York City Housing Authority. M. L. Montgomery, Executive Secretary, Florida State Planning Board. Louise Morel, Chairman, Public Welfare K.F.W.C., Louisville, Ky. Joseph Nevin, District Manager, New Jersey State Housing Authority. J. C. Nichols, Country Club District, Kansas City (Realtor). John Nolen, Planning Consultant. William Stanley Parker, Architect. Langdon W. Post, Chairman, New York City Housing Authority. Mrs. Alice Flexner Rothblatt, Secretary, Housing Section, Welfare Council, New York City. Bertram H. Saunders, Industrial Executive. Henry H. Saylor, Editor, "Architecture." L. Segoe, Planning Consultant. Walter J. Shepard, Chairman, Ohio State Planning Board. Lawrence V. Sheridan, Consultant, National Resources Committee: Indiana State Planning Board. Mrs. Mary K. Simkhovitch, President, National Public Housing Conference: Director, Greenwich House. Harold D. Smith, Director, Michigan Municipal League. C. Smithdeal, Realtor; Director, National Association of Real Estate Boards. Florence D. Stewart, Secretary, Washington Committee on Housing. P. L. Strait, Director, Housing Authority, Youngstown, Ohio. Elwood Street, Director, Board of Public Welfare, Washington, D. C.; Executive Committee, National Conference of Social Work. Howard Strong, Secretary, Wyoming Valley Chamber of Commerce. Earl Talbot, Executive. L. Deming Tilton, Consultant, California State Planning Board. M. W. Turkelson, Secretary, Wisconsin State Planning Board. Harriet Townsend, Chairman, Housing Committee, Women's City Club, New York City. Joseph P. Tufts, Executive Director, Pittsburgh Housing Association. Wickes Wamboldt, Mayor, Asheville, N. C. Franklin Wentworth, Managing Director, National Fire Protection Association. C. B. Whitnall, Secretary, Public Land Commission, Milwaukee. Harold E. Winey, Secretary-Engineer, City Plan Board, Dayton. Coleman Woodbury, Director, National Association of Housing Officials, Chicago. Henry Wright, Research Architect, Columbia School of Architecture. Calvin W. Yuill, Executive Director, Housing Association of Metropolitan Boston.

BUILDING FOR S. H. KRESS AND COMPANY

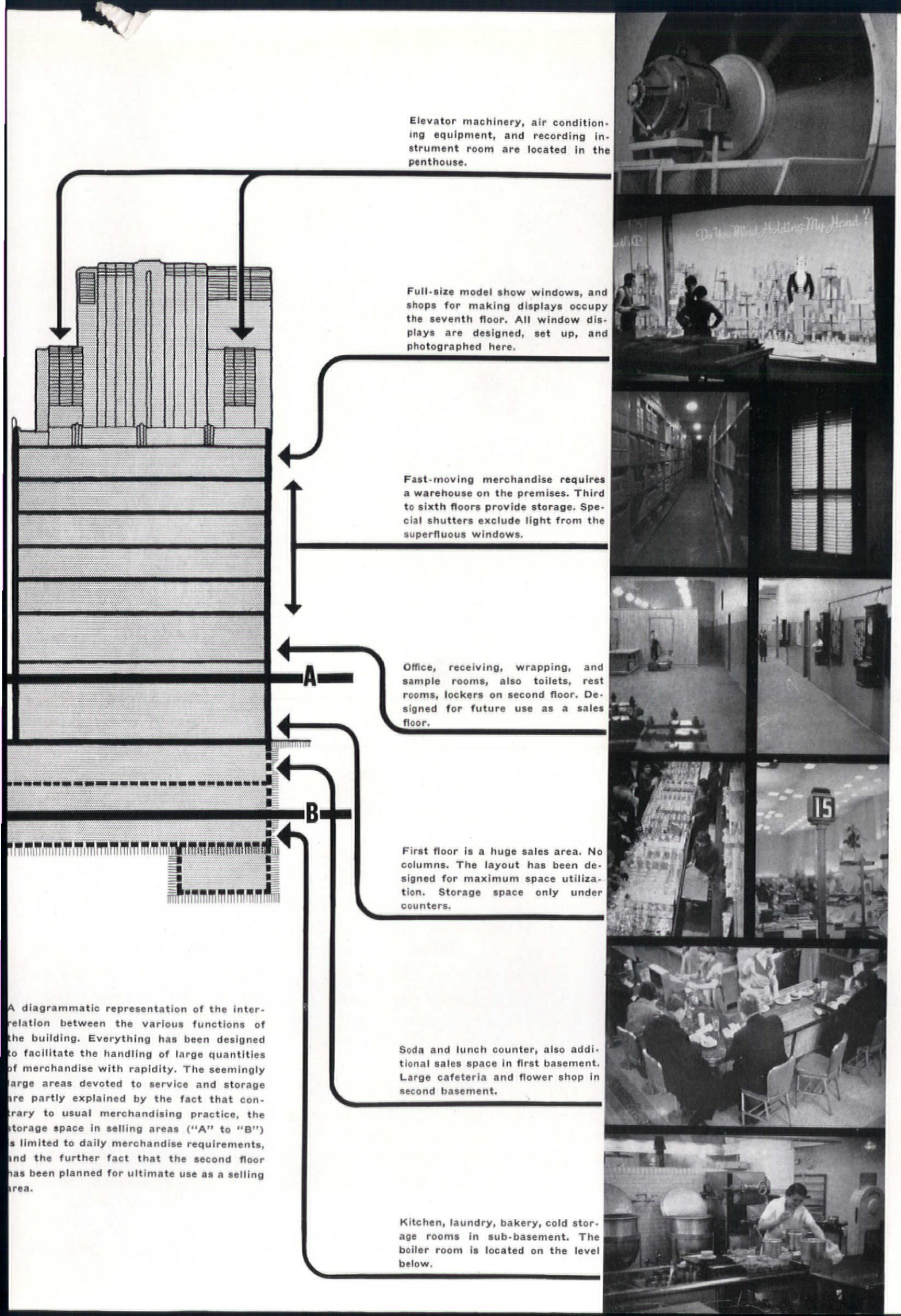
NEW YORK CITY

EDWARD F. SIBBERT
ARCHITECT

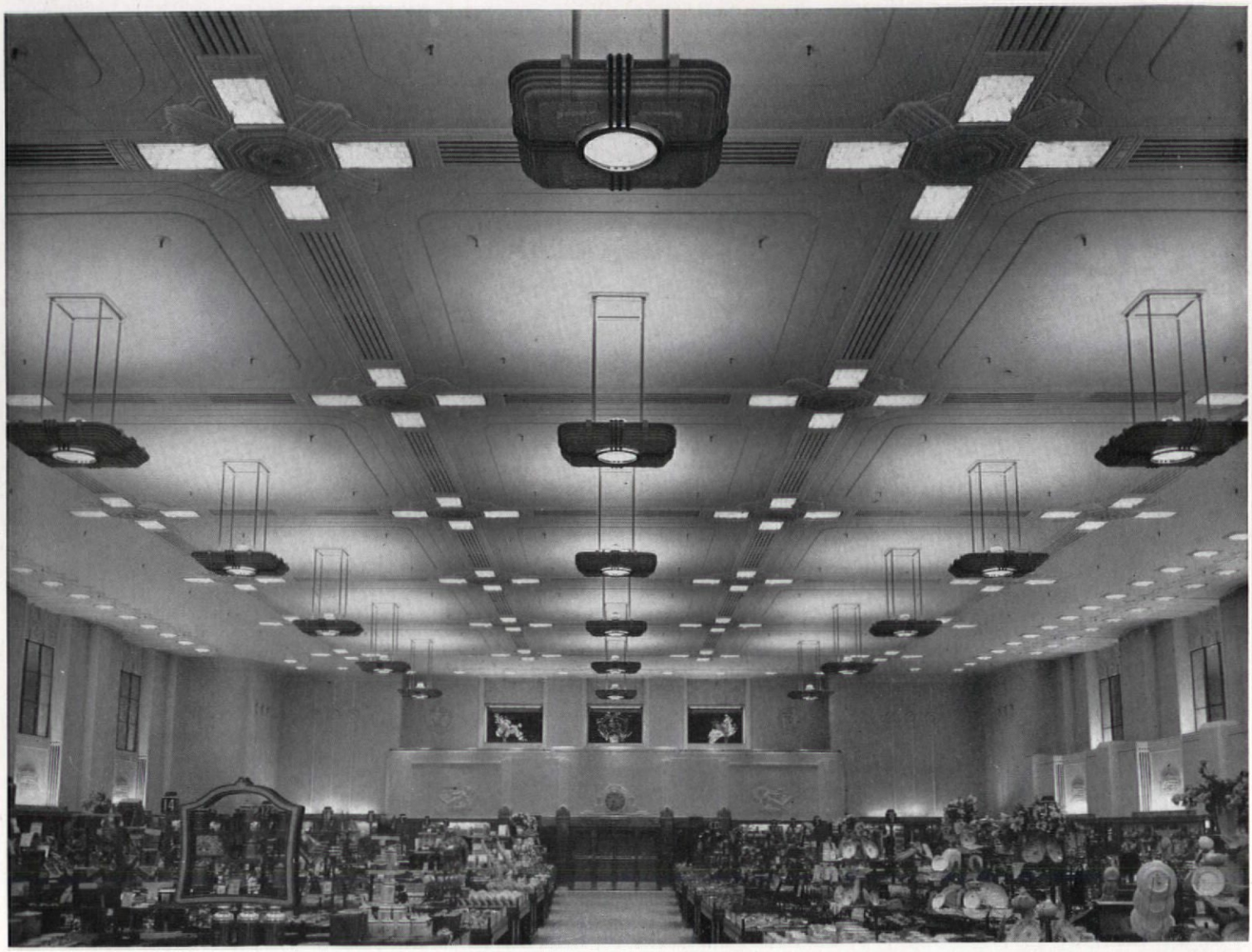
BARR, IRONS & LANE, INC.
BUILDERS

F. S. Lincoln Photos

In November, 1934, the Wendel house (small photograph), dour retreat of two aged spinsters and a dog, went the way of many other Fifth Avenue houses. Increasingly conspicuous as stores and offices invaded a once-residential district, the house and adjoining lot were finally sold after the death of its occupants, and replaced within a year by the most imposing structure ever built for the exclusive use of a 5-10-25 cent store. With the pomp of a courthouse or cinema palace it houses nine floors of machinery, service equipment, and storage space, three floors of selling area. As a smoothly functioning organism, devoted to the selling of small articles in fantastic quantities and at a staggering rate of speed, it is perhaps the most interesting building of its kind ever erected, something less than that as an architectural design. Essentially it is a department store, carrying over 3,500 items in stock. Unlike the average department store, it devotes its entire selling area to selling, with its storage space concentrated in a warehouse that occupies the bulk of the upper floors. So rapid is the turnover that the warehouse must be on the premises, even though those premises happen to be located on one of the most expensive pieces of real estate in the world. Warehouses do not need windows, and here the windows are covered with shutters of special design which effectively exclude most of the light. Had what actually happens inside been expressed as



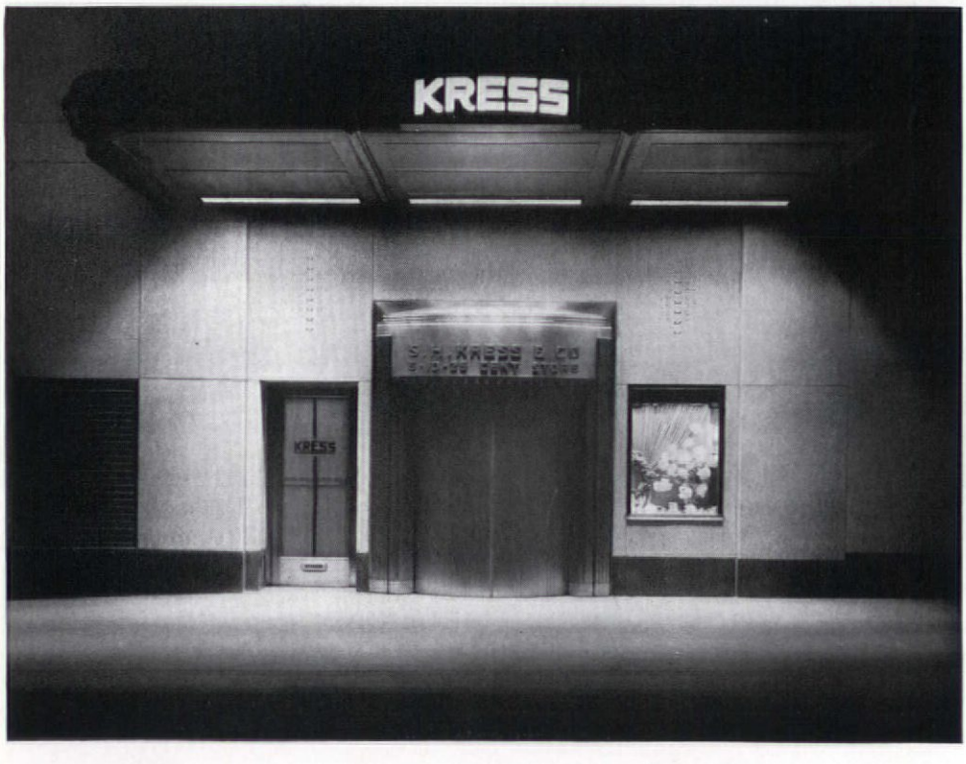
A diagrammatic representation of the interrelation between the various functions of the building. Everything has been designed to facilitate the handling of large quantities of merchandise with rapidity. The seemingly large areas devoted to service and storage are partly explained by the fact that contrary to usual merchandising practice, the storage space in selling areas ("A" to "B") is limited to daily merchandise requirements, and the further fact that the second floor has been planned for ultimate use as a selling area.



INTERIOR AT STREET LEVEL

rationally as the plans were worked out, New York might have been able to boast as fine a piece of commercial architecture as could be found anywhere. The main selling floor, shown above, illustrates with how keen a sense of merchandising the interiors were designed. No columns clutter this area; trusses extending from the third to fifth floor span the entire width, and hangers support the first floor ceiling. Bronze standards with illuminated numbers replace the usual flutter of pasteboard signs that make the average five and dime store resemble a fair ground. It is the lighting, however, that has caused the most comment. A combination of direct and indirect lighting builds up a general illumination level of 40 foot-candles, more than six times the brightness of the average department store interior. High intensity lighting is stimulating, and its effect on the buying urge is greater than is commonly realized. The indirect lighting is well diffused, with little of the spottiness that appears in the photograph. Counters are worked out to a high degree of efficiency, with nothing to distract the buyer from the merchandise; those counters projecting up above average height, as in the candy department, are placed against the side walls. The ornament and bas-reliefs are by René Chambellan. Stairs in the rear of the store lead up to a small

WOMEN'S REST ROOM

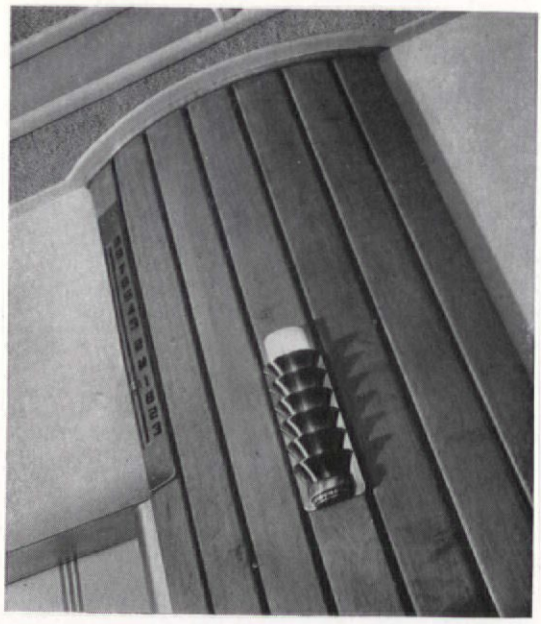


SIDE ENTRANCE

LUNCH COUNTERS

mezzanine where women's toilets and a commodious rest room are located. Other stairs give access to the two basement levels. It will be noted that it is an almost invariable practice in stores of this kind to place vertical circulation and such elements as rest rooms at points which necessitate passing through a large portion of the main selling area. The first of the basements is divided into space for merchandise and a series of soda and lunch counters. An interesting feature of the latter is the sunken service floor which places the waiters in a better position for serving, and provides additional storage space under the counters. Details of the equipment in this part of the store were studied with great care, and full size models were made to determine correct stool and counter heights, spacing, etc. From this level a double stair descends to the second basement, where a large cafeteria and flower shop are located, the latter being something of an innovation. It is well situated at the foot of the stairs, and has displays of potted plants and cut flowers. This expanse of greenery opening on to the cafeteria furnishes a most refreshing contrast to the metallic hardness of the surroundings. Both lunch room and cafeteria are served from one kitchen in the sub-basement. It is a complete unit including dishwashing room, laundry, bakery, cold storage rooms, and an ice cream plant. The lowest level, fourth below the street, contains the heating plant.

DETAIL



CAFETERIA

EXCAVATIONS AND BASEMENT ENCLOSURE WALLS—Entire area rock-cut. Basement walls and sub-basement slab stone concrete, integral waterproofing, George J. Atwell Foundation Corp. Iron coat dampproofing on sub-basement slab and inside of walls to grade, Cement Floor Co., Inc. Tile drainage system laid in rock fill. Drain tile, Robertson Clay Products Co. Structural steel fireproofed with stone concrete, Brennan & Sloan, Inc.

STRUCTURAL STEEL FRAME—Steel, Carnegie Steel Co; fabrication, American Bridge Co. Shop coat iron oxide paint; field coat heavy mastic paint, Detroit Graphite Co. Dampproofing and protection of steel, Munro Waterproofing Co. Steel columns extend above roof for future eighth and ninth floors.

FLOOR ARCHES—Floor and roof arches of two types. Short spans: concrete with wire mesh reenforcing. Large spans: slag blocks with two-way reenforcing.

SHEET METAL—Copper flashings at roof. Thru-flashing for parapet walls. Flashing at window head and sills: copper cloth. Copper water pans, cooling towers. Copper, American Brass Co. Air intakes louvers stainless steel, Republic Steel Corp.

ROOFING—Roof arch covered with one inch celotex insulation. Roofing pitch and felt, Barrett Co. Slag, Exner Sand & Gravel Co.

EXTERIOR AND INTERIOR WALLS—First story exterior dark Quincy Granite and Mt. Airy granite. Upper stories, exterior, South Dover marble, Wingate, N. Y. Spandrels, Clark's Oriental granite, Rockville, Minn.

INTERIOR PARTITIONS—Hollow tile blocks enclose vent shafts, elevator shafts, stairways, show window backs and sales areas. Structural glass in public toilets, Pittsburgh Plate Glass Co. Glazed brick tile in elevator corridors, stock floors, and employes' rooms, Belden Starck Brick Co. Metal toilet partitions in employes' toilets, Philadelphia Fire Retarding Co.

METAL FURRING AND LATHING—Suspended ceilings expanded metal lath, U. S. Gypsum Co. "Red top mesh." Corner beads, metal rail type. Corners liable to damage protected by bull nose corner guards, Milcor Steel Co.

PLASTER WORK—All plaster work on lath three coats: on masonry walls, two coats. Portland cement plaster on walls of maintenance rooms. Acoustical plaster on walls of elevator corridors and ladies' lounge. Keene cement plaster on outside walls, stairways. Common lime and finishing lime hydrated, "Tiger brand." Bond plaster, neat plaster, plaster-of-Paris, lath and Hy-Rib lath, U. S. Gypsum Co. "Red Top." Portland cement, Atlas Cement Co. Acoustical plaster, Sabonite A.

PAINTING—Sales area walls canvassed and painted lead and oil, stipple finish. Ceilings painted lead and oil, stipple finish, ornament glazed. Exterior metal, except bronze, nickel silver, stainless steel and copper, painted lead and oil. Paint material, A. Wilhelm Co., Reading, Pa. Canvas, R. H. Macy & Co. Brick and cement paint, G. Moore.

METAL WINDOWS—Windows in first story architectural projected type. Balance of double hung type, copper bearing steel, S. H. Pomeroy & Co. Glazing, Pittsburgh Plate Glass Co.

DOORS—Sales area doors stainless steel, bronze and hollow metal baked enamel finish. Maintenance and employes' area doors hollow metal baked enameled finish, Dahlstrom Metallic Door Co. and General Bronze Corp.

ORNAMENTAL METAL—Stainless steel and bronze for trim and display cases in cafeteria and soda and lunch areas. Natural bronze and nickel silver for newels, display cases and hand rails. General Bronze Corp. Show window fronts, revolving doors, etc., natural yellow bronze. Store name inscriptions nickel silver, General Bronze Corp. Swing doors and revolving doors, shatterproof glass, Pittsburgh Plate Glass Co. Architectural glass over entrance doors, Corning Glass Works. Concealed awnings and canopy main entrance, New York Awning Co. Freight entrance doors, motor operated, The Peelle Co., Inc. Flag poles, natural bronze, Pole & Tube Works.

INTERIOR FINISH—Cafeteria: Counters, Tamo wood with counter top of stainless steel. Cafeteria serving equipment stainless steel, Republic Steel Corp. Tables, Harewood. Chairs aluminum with real Morocco leather upholstering. Flower department, open display refrigerator, by Hill Refrigerator Co. Woodwork, David Kramer, Inc. Mirrors, Pittsburgh Plate Glass Co. Ornamental work, General Bronze Corp. Furniture, W. G. Ballard Co.

FLOORS — Cement finish floors, sidewalk finish alundum non-slip aggregate. Maintenance floors and stockroom floors, colored cement with hardener. Floors treated with preservative "Esco," Preservative Products Co. Other floors, kitchen Quarry tile, Lieber & Nobbe, Inc. Cafeteria, Soda and Lunch and Ladies' Lounge: Terrazzo, V. Foscato, Inc. Basement and first floor sales: Italian Travertine. Toilet floors, tile. Linoleum, employes' rooms, Congoleum-Nairn Co.

SODA AND LUNCH—Front of counters Convent Sienna, Breche Amarante base, Verde Antique top. Stainless steel shelving, Republic Steel Corp. Equipment stainless steel and white metal chromium plated. Russ Mfg. Co. Counter stools aluminum and red Morocco leather upholstering. W. G. Ballard Co. Walls have lighted display cases with mirrors and stainless steel trim.

FIXTURES, SALES FLOORS—Counters and displays Zebra wood, walnut, satinwood, prima vera, birch, bubingo.

LADIES' LOUNGE—Curly maple wainscot, mirrors above. Ladies' wash room structural glass wainscot, mirrors above, Pittsburgh Plate Glass Co.

INTERIOR MARBLE—Travertine on stairs, in basement and first floor. Notre Dame for standing marble in entrances, stairs, wainscots, etc. Renfrew and Breche Amarante for base in sales areas. Convent Sienna, Breche Amarante, and Verde Antique for soda and lunch counters.

TILE WORK—White matte tile in public toilets, kitchen and adjoining rooms. Faience tile, green tile and gold tile on cafeteria walls. Lieber & Nobbe, Inc.

VENETIAN BLINDS—Venetian blinds and shutters, J. G. Wilson Corp.

ACOUSTICAL TILE—Acoustical tile on ceiling of kitchen, dishwashing room, cafeteria, soda and lunch, and office, Acoustical Construction Corp.

HEATING AND VENTILATING—Two-pipe open return line system, operated ten pounds gauge pressure. Three Kewanee steel boilers, fired by Petroleum heat and power semi-automatic oil burning system. Direct radiation used in offices. Storage spaces heated by Venturafin unit heaters. Work floor spaces ventilated with unit ventilators. Toilet and kitchen exhaust fans A-B-C non-overloading type, Reliance Motors. Entrance heating by fan blast. Powers pneumatic temperature control used on radiators and unit ventilators. Vacuum traps, Warren Webster & Co. Draft-o-Stat, Boiler Room Equipment Co. Non-conducting covering, Johns-Manville. Radiator valves, thermostatic, Powers Regulator Co. Aerofin stacks, Aerofin Co. Unit ventilators, disc fans and centrifugal fans, American Blower Co. Control, Cutler-Hammer Co. Registers, Register & Grille Mfg. Co. Ventilators, H. H. Robertson. Installation, Baker, Smith & Co.

AIR CONDITIONING—Salesrooms, soda and lunch cafeteria, kitchen, offices and candy storage room. Air conditioning equipment in pent houses—two Carrier centrifugal refrigerated compressors, motor driven—chilled water pump through Aerofin cooling coils—Somers glass filters for cleaning supply and return air—two Foster Wheeler cooling towers enclosed in masonry. Supply fans, double inlet, double width Buffalo non-overloading type, Reliance Motors. Duct system insulated with Armstrong cork. Taylor full scope automatic temperature regulating instruments with recorders. Water filters, Parks Quartz, Parks Cramer Co. Return grilles, Tuttle & Bailey. Heaters, reheaters and preheaters, Aerofin Corp. Water pumps (centrifugal), Buffalo Pumps Co. and Westco Pump Co. Motor starters, Cutler-Hammer.

ELECTRICAL WORK—Annunciators, bells and transformers, Edwards. Cabinets and panels, Federal Steel Products. Panels and switchboards, Cole Electric Products Co. Conduit, Central Tube Co. Floor boxes, Steel City. Outlet boxes and covers, Appleton, Steel City, and Bryant. R. C. Wire, Collyer Ins. Wire Co.—Crescent. Receptacles, Hart & Hegeman, Bryant, Harter, and Van Brunt. Safety switches, Hart & Hegeman and Federal Steel Products Co. Time switches, Stromberg Electric Co.

LIGHTING FIXTURES—Hanging fixtures in basement, Shapiro & Aronson, Inc. Hanging fixtures, first floor and ladies' lounge; wall fixtures, signs and counter number fixtures, Frink Corp. Direct downward lights and indirect wall lights first floor, Curtis Lighting.

ANNOUNCING SYSTEMS—Transmitters and loudspeakers in restaurant connecting kitchen, cafeteria and soda and lunch areas. Sound equipment, microphone, loudspeakers, R.C.A.

PLUMBING—Steel pipe, Wheatland Tube Co. Fittings, Grinnell Co. and New York Brass Foundry Co. Brass pipe, American Tube Works. Cast iron pipe, Central Foundry Co. Valves, Chapman Valve Co. Sump pumps and house pumps, Economy Pump Co. Hot water tank, The Sims Co. Ejectors, Nash Engineering Co. Fire equipment, U. S. Rubber Co. Flushometers, faucets and basin wastes, Speakman Co. Fixtures, John Douglas. Eighty-five per cent magnesia covering, Ehret Magnesia Mfg. Co. Cork covering, Mundet & Co. Wool felt covering, National Asbestos Co. Controls, Clark Controller Co.

SPRINKLERS—throughout, A. D. T. inspection service. Steel pipe, Wheeling Steel Corp. Sprinkler head and alarm valves, Globe Automatic Sprinkler Co. Air compressors, American Air Compressor Co. Fire Department connections, W. D. Allen Co. Installation, Globe Automatic Sprinkler Co.

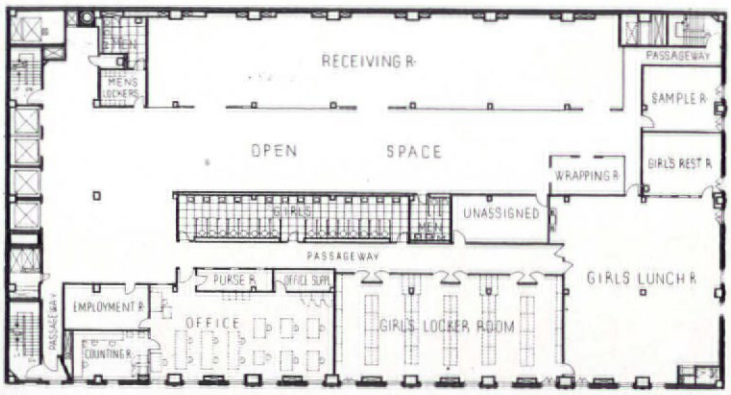
LIGHT IRON—Light iron used for marquise, show windows, ornamental stair framing, service stairs. Safety treads, Bronzalun and Feralun door saddles, American Abrasive Metals Co. Access doors, Columbia Metal Box Co. Scuppers, Windshield Scupper Co. Standard grilles, U. S. Register Co. Tracks, hangers, etc., Richard Wilcox Mfg. Co. Bronze sheets and extruded shapes, American Brass Co. Steel sheets, bars and plates, Jones & Laughlin Steel Corp. Light iron work by Sexauer & Lemke.

HARDWARE—Natural bronze and white metal chrome plated, P. & F. Corbin.

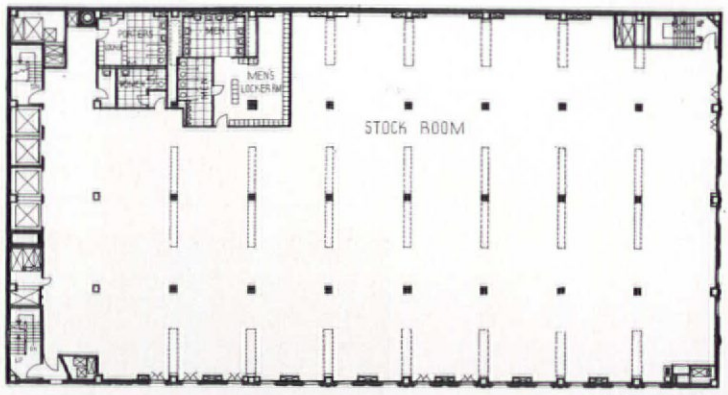
ELEVATORS AND DUMBWAITERS—Combination freight and service elevators, combination push button and manual control. Two dumbwaiters connect kitchen, cafeteria and soda and lunch. One dumbwaiter, connects candy department with stockroom. Installation of cabs, Otis Elevator Co.

TRAYVEYORS—Two trayveyors connect kitchen with cafeteria and soda and lunch.

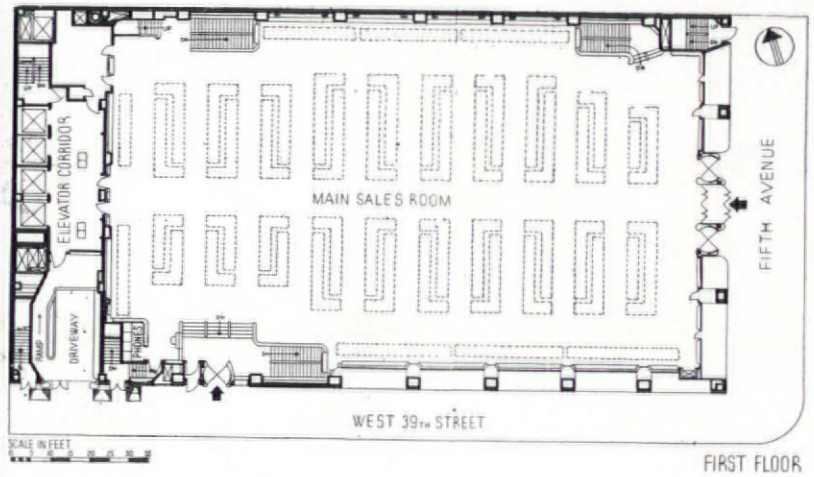
KITCHEN EQUIPMENT — Cooking equipment, stainless steel and aluminum, Nathan Strauss Co. Refrigerator boxes, Cork Insulation Co. Ice cream making equipment, York Ice Machinery Corp. Laundry equipment, Troy Laundry Machinery Co. Dishwashing machinery, Faspray Co. Trash and garbage destructor, Morse Boulger Co. Refrigeration, Service Specialty Co.



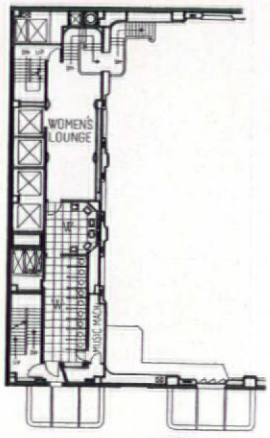
SECOND FLOOR



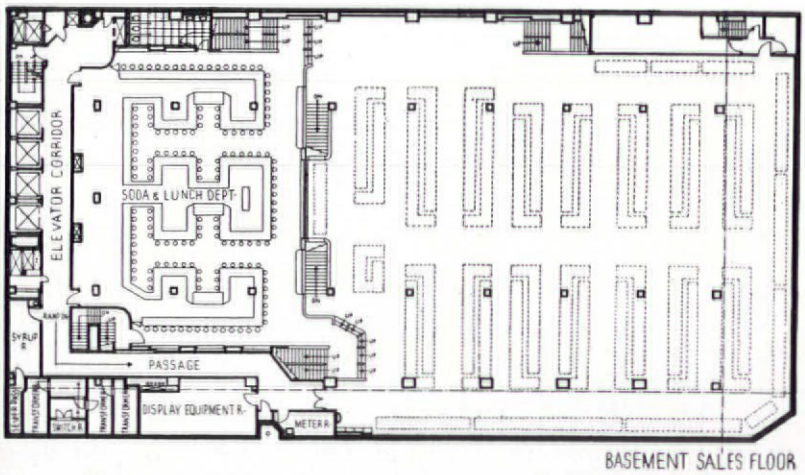
THIRD FLOOR



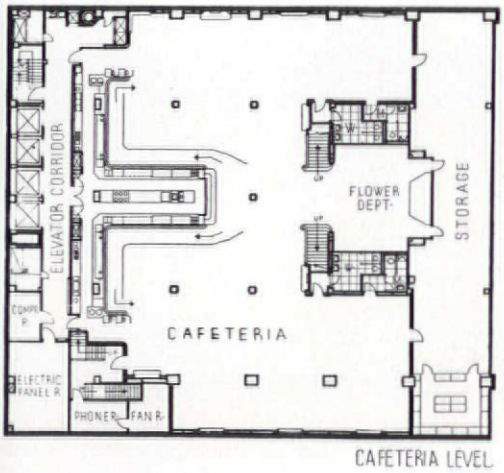
FIRST FLOOR



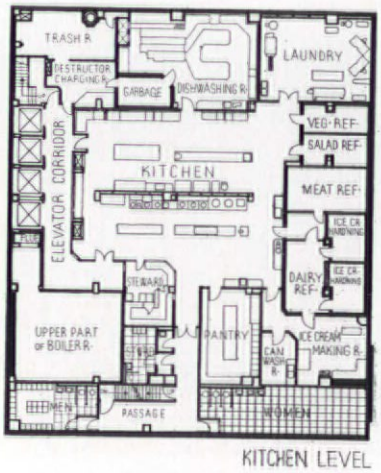
MEZZANINE



BASEMENT SALES FLOOR



CAFETERIA LEVEL

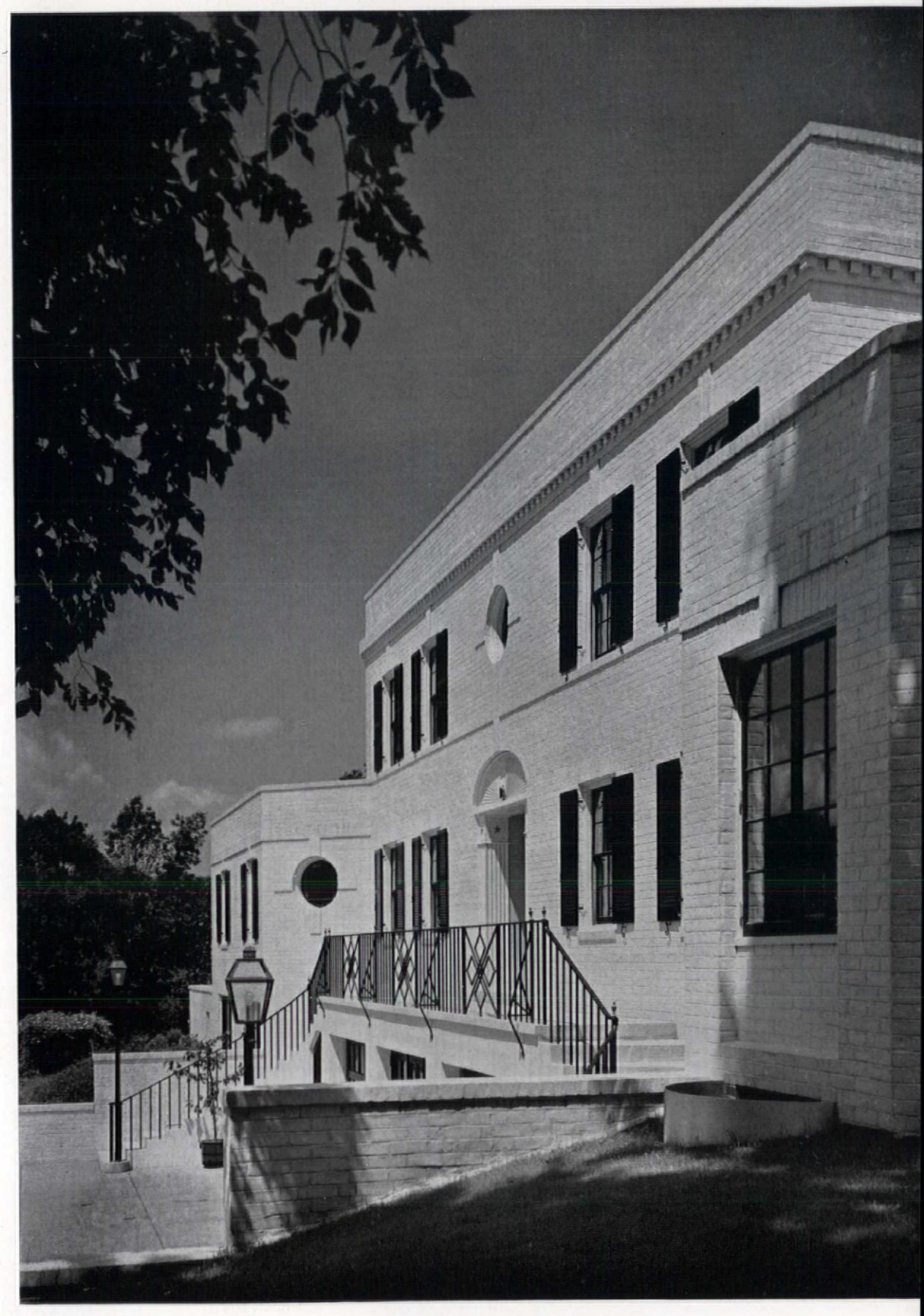


KITCHEN LEVEL

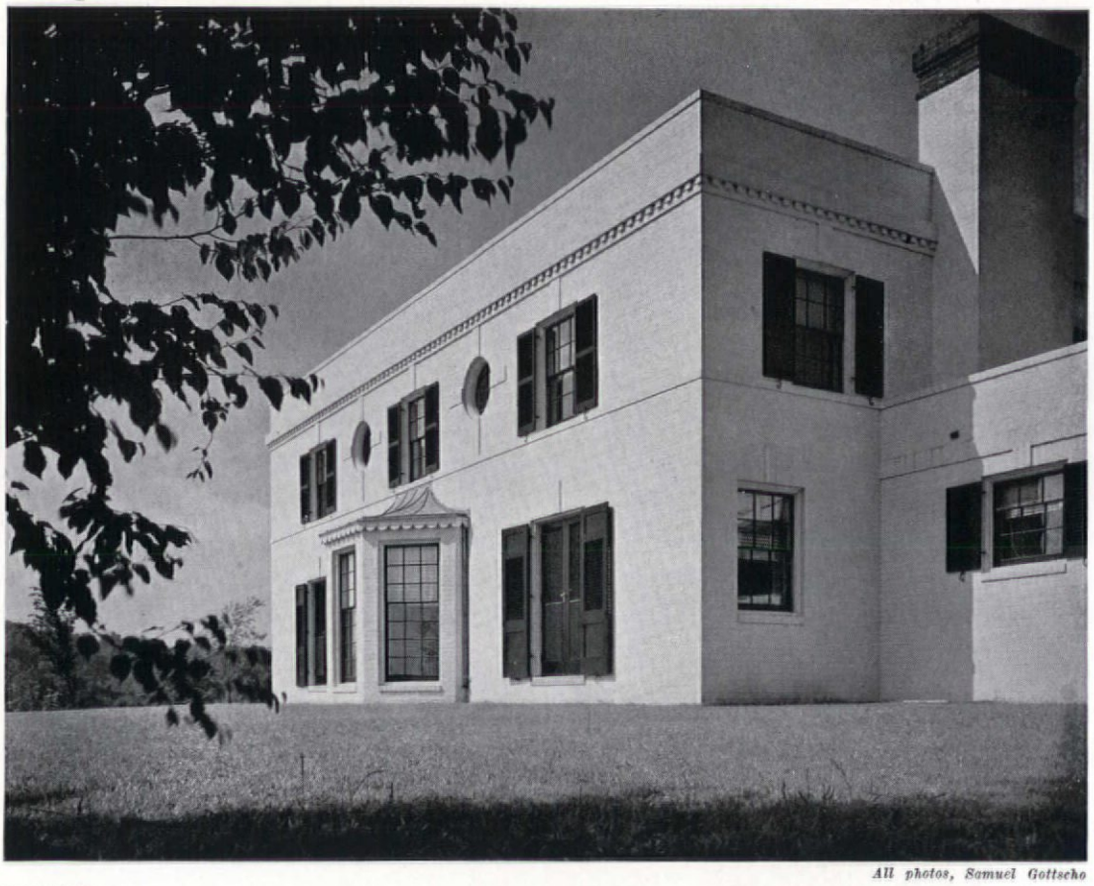
Counters on first floor and basement levels are only approximate (dotted lines), and storage shelves on third (typical storage) floor are omitted because this information was not made available. Note the degree to which services have been concentrated in the rear of the building, occupying only a small fraction of the floor area. The trusses (see third floor plan) which extend through two floors, are so arranged in conjunction with storage shelves that their presence causes no inconvenience.

HOUSE FOR C. W. STEPHENSON, WEST HARTFORD, CONN

ADAMS AND PRENTICE, ARCHITECT



APPROACH

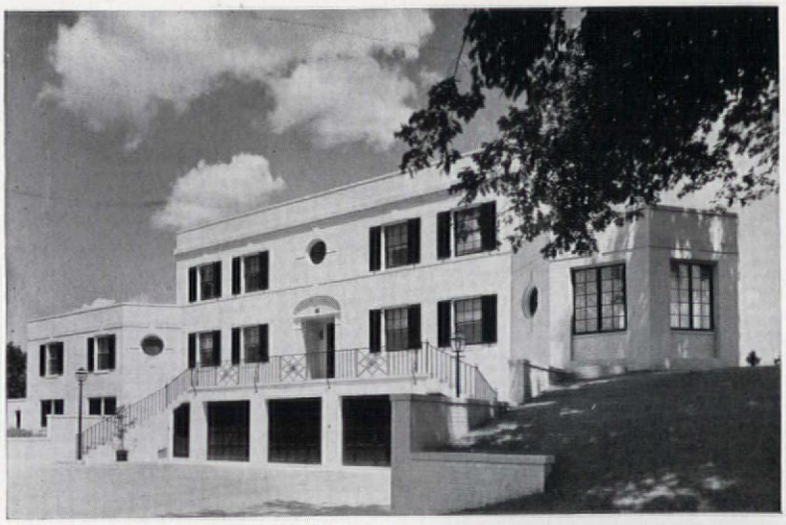


All photos, Samuel Gottscho

REAR

At first glance this house would hardly qualify as "Modern." It has a wrought iron railing, shutters, and its windows shun the corners. It resembles the familiar Georgian residence, displays more than ordinary style, and is obviously inspired by the domestic work in England done around the beginning of the nineteenth century. Yet, with a frankness unsurpassed by the most stylistic of modern houses, it openly accepts today's functional relationship between the house and the automobile. The house is located on the fringe of a Hartford suburb; no street car line passes it; no bus. The nearest market, school, or drug store is within hiking, but not walking distance. For all practical purposes it is out in the country; whoever arrives or leaves will do so by car. The front door, therefore, is not so much the tasteful entrance on the first floor level, but the garage. And it is from the garage that the main stair begins. Regardless of its exterior treatment, such a design could hardly be classified as traditional. It has no horizontal expanse of glass, to be sure, but it is of fireproof construction, and there are two roof decks for sun bathing. And the glass facade, to quote Mies van der Rohe, a high priest of Modernism, is not modern architecture. That the house be fireproof was demanded by the owner after his previous house on the same site had burned down. The plan and interiors are more conventional: downstairs there is the usual arrangement of dining room and living room separated by the entrance hall; upstairs are a child's room, a guest room, and a commodious suite for the owner. The ground floor includes, in addition to the garage, a playroom, service rooms, and a completely equipped work shop.

HOUSE FOR C. W. STEPHENSON, WEST HARTFORD, CONN.

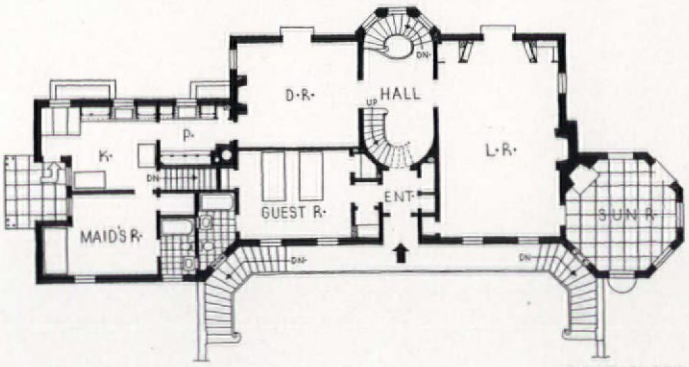


HALL

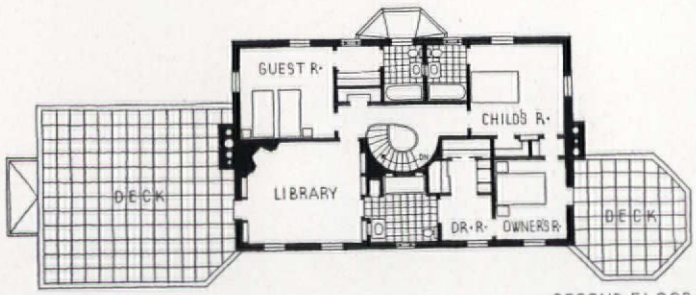
Simple, light-colored interiors reflect the character of the elevation. White trim and paneling, bright wallpapers, and linoleum floor coverings are used extensively, producing an agreeable effect of spaciousness and air throughout the house. The view of the hall, on the opposite page, shows the prominence given to the stair leading up from the garage. The illustration of the living room features one of the special cabinets for small carvings, lighted from above.

LIVING ROOM DETAIL

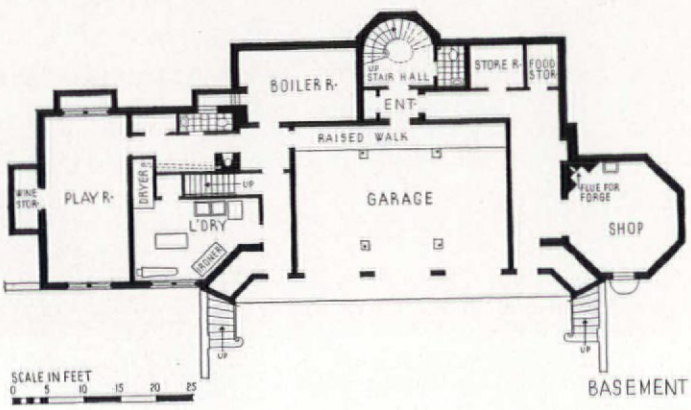
OWNER'S SUITE



FIRST FLOOR



SECOND FLOOR



BASEMENT

With the exception of the garage, a fairly typical closed plan. Privacy given one guest room with its location off entry on first floor. Owner's bedroom is entered through library, bath, and dressing room, not necessarily an undesirable arrangement. Both decks open off owner's suite.

CONSTRUCTION OUTLINE

FOUNDATION
- Walls, Footings } concrete.
- Columns or piers—concrete and lally columns.
- Cellar floor—cement.
- Waterproofing—footing drains only.

STRUCTURE
- Masonry
  - Brick—8 in. brick, common.

EXTERIOR SURFACE
- Brick painted white.

ROOF
- Tile
- Gutters, Leaders, Flashing } copper.

FLOORS
- Living room, Sleeping rooms, Halls, Kitchen, Bathrooms } linoleum on Bedford Hills Concrete Products Co.'s "Floroform" (Precast concrete joists).
- Cellar, Laundry } cement.

DOOR AND WINDOW FRAMES
- Sash—wood.
- Double hung.

DOORS AND FRAMES (EXTERIOR)
- Wood.

GARAGE DOORS
- Overhead type.

PORCHES
- Cement floors.

GLASS
- Thermopane.

EXTERIOR PAINT
- Minwax on brick.
- Trim, Sash } Priming—aluminum. Finish coat—lead and oil.

LATH AND PLASTERING
- Lathing—metal.
- Plastering—patented 3-coat job.

INTERIOR WOODWORK
- Trim, Shelving and cabinets, Stock millwork } white wood.

INSULATING
- Outside walls—paper and rock wool between furring.
- Roof rafters—rock wool.
- Weatherstripping—zinc.

INTERIOR PAINTING
- Trim, Doors, Sash, Walls } lead and oil.
- Wallpaper—most bedrooms and baths.

ELECTRICAL SYSTEM
- G. E. Supr-Kode, rigid conduit.

LIGHTING
- Direct
  - Fixtures—Cecil K. White, Inc., New York, N. Y.

PLUMBING
- Kitchen
  - Sink—porcelain
  - Cabinet—wood with linoleum top
  - Stove—gas
  - Refrigerator—Norge.
- Bathroom
  - Lavatories, Cabinets, Built-in bathtubs, Toilets, Seats, Showers, Shower curtains } Standard Sanitary.
  - Wall finish—Keene's cement.
  - Pipes—brass.
    - Soil—cast iron.
    - Supply—brass.
    - Vents—cast iron.

HEATING
- Split system, air conditioned, specially engineered.
- Oil—Branford Oil Burner, New York, N. Y.
- Hot water heater—Taco.
- Radiators—American Radiator Co.
- Thermostat and regulators—Minneapolis-Honeywell Regulator Co.

CHIMNEY
- Lining—Terra cotta.
- Fireplaces
  - Facings—brick, some slate.
  - Hearths—brick.
  - Mantels—wood.
  - Damper—Covert, old style.

HARDWARE
- Interior, Exterior } brass, Corbin.

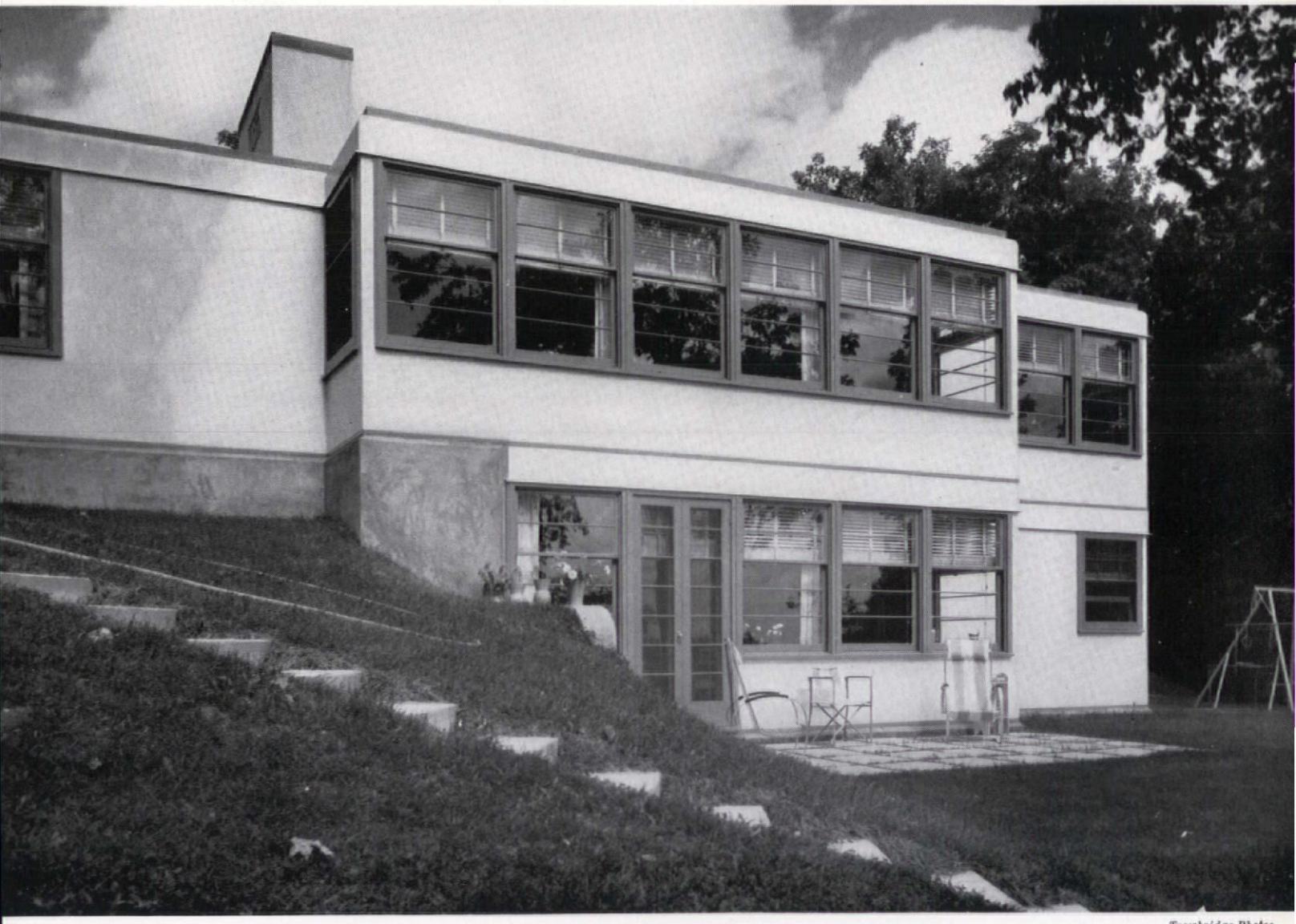
SCREENS
- Frame—wood.
- Mesh—copper.

SPECIAL EQUIPMENT
- Radios, aerials, etc., built in.

HOUSE AT LAKE DELAVAN, WISCONSIN

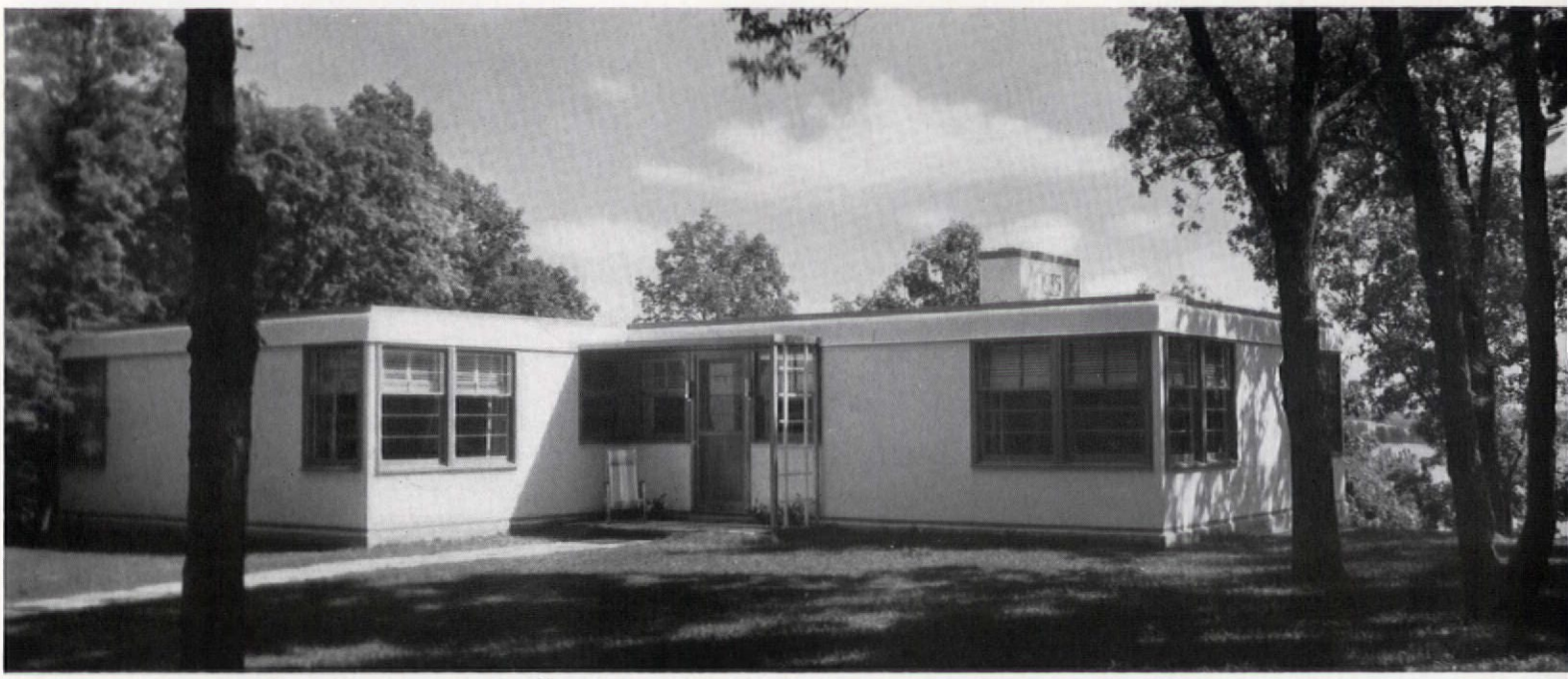
HOWARD T. FISHER, ARCHITECT

GENERAL HOUSES, INC., PRODUCER



Trowbridge Photos

HOUSE AT LAKE DELAVAN, WISCONSIN



MAIN ENTRANCE

This is a prefabricated house. The interiors show honesty of expression and restful simplicity. Built of stock pieces, windows, unit panels, four-foot squares of celotex, and furnished with low-priced modern furniture, these rooms achieve a truly remarkable completeness and dignity, demonstrating beyond question that frank expression of the underlying construction is still the way to good architecture. The same degree of success cannot be attributed to the exterior. Possibly the problem was more difficult; in any event the highly organic quality of the interiors is lacking. The prefabricated house will have to arrive at more than a haphazard collection of doors, walls, and windows before it wins general acceptance. There is no reason, however, why satisfactory exteriors should not be developed after more experience with this new medium has been gained.

The house was designed primarily for use in summer, but due to the increasing popularity of winter sports and to its proximity to Chicago, it was made suitable for occupancy in the severest weather. Insulation is used throughout, in interior as well as exterior partitions, and over the kitchen ceiling to reduce sound transmission. The central portion of the building is devoted to two large living rooms, each with large window area commanding a view of the lake. Further extension of the living space was made possible by a terrace on the lower level. The approximate cost of the house was $12,000, a figure by no means excessive for a residence of this size.

LIVING ROOM, SHOWING FIREPLACE

LIVING ROOM

HOUSE AT LAKE DELAVAN, WISCONSIN

DINING-RECREATION ROOM

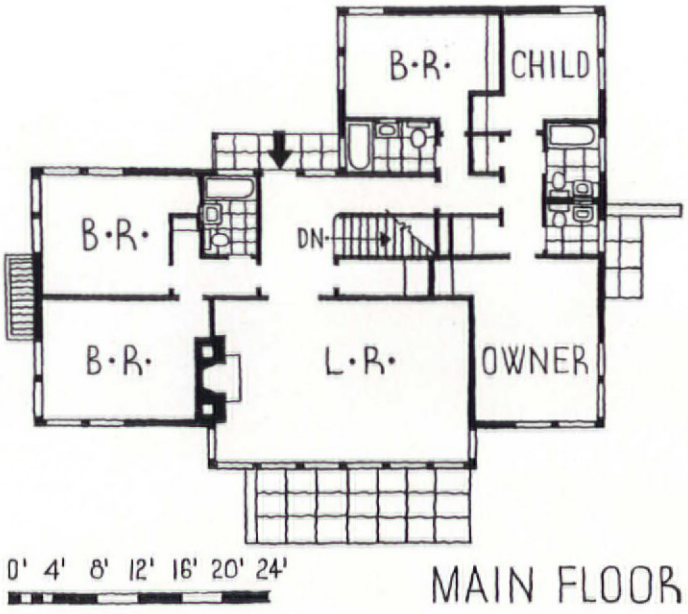
BEDROOM

The modern interior is partly a reaction to the cluttered, over-furnished rooms of the recent past, partly an answer to a demand for new backgrounds for a new way of living. Here, as in other contemporary work of similar quality, the elements of the rooms themselves are the design; nothing is superimposed.

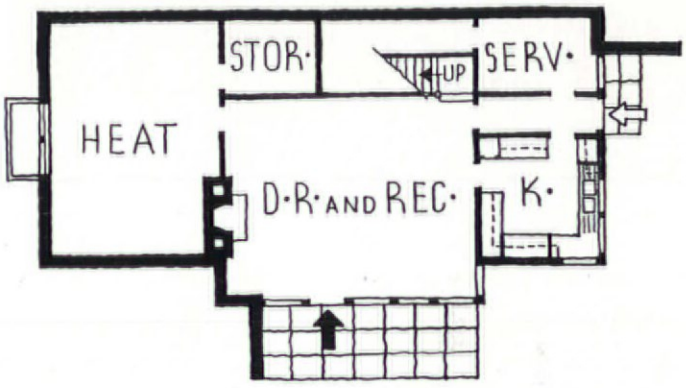
HOUSE AT LAKE DELAVAN, WISCONSIN

BATH

KITCHEN



MAIN FLOOR



LOWER FLOOR

The entrance on an upper level is customary in hillside houses; the split arrangement shown here, with living rooms on both levels, is less common. There are some advantages in such a division, chief being the possibility of privacy for some members of the family while others entertain. The proportion of living room space to bedrooms and service is larger than is usual, but for a week-end and summer residence it is most satisfactory. Privacy is afforded guests by the use of the main hall to separate the two groups of bedrooms. Servants' quarters are provided in a caretaker's cottage.

CONSTRUCTION OUTLINE

FOUNDATION
Concrete
Ground floor—concrete.

STRUCTURE
Copper-bearing steel panels bolted together and to an angle iron sill anchored in the foundation. For details see ARCHITECTURAL FORUM, Dec. 1935, P. 556.

EXTERIOR SURFACE
Copper-bearing steel, painted white. Paint by Pittsburgh Plate Glass Co.

ROOF
Flat membrane type.

FLOORS
Living room, Sleeping rooms, Halls } fir
Kitchen, Bathrooms } Linoleum—Armstrong Cork Products Co.

DOOR AND WINDOW FRAMES
Sash—wood double-hung. Curtis "Silentite."

GLASS
Lustraglass, by American Window Glass Co.

INTERIOR FINISH
Plywood panels of Philippine mahogany and other woods for walls. Ceilings, except in kitchen and bath, of oyster gray Celotex in four-foot squares with V-joints. Plywood in kitchen and bath.

INSULATING
Rockwool bats throughout, all walls and partitions, under first floor, over kitchen ceiling. General Insulating & Mfg. Co.

PLUMBING
Kitchen
(a) sink—Crane Co.
(b) cabinet—Curtis Companies, Inc.
(c) stove—"Hotpoint"—General Electric Co.
(d) refrigerator—Frigidaire.
Ventilator—American Blower Co.
Bathroom
Fixtures—Crane Co.
Cabinets—Morton Mfg. Co.
Bath accessories—Gardner-Vail, Inc.

HEATING
Type of system—Forced warm air.
Boiler—Green Colonial, with Colonial Superquiet burner.
Hot water heater—"Hotpoint"—General Electric Co.

AIR CONDITIONING
Central—Colonial, Century Engineering Co.

FIREPLACES
Facings—Antique Italian brick.

HARDWARE
Interior and exterior by P. & F. Corbin Co.

WINDOW DRESSING
Venetian blinds by Kirsch Co.

RESTAURANT LONGCHAMPS, NEW YORK

LOUIS ALLEN ABRAMSON, ARCHITECT
WINOLD REISS, DESIGNER AND DECORATOR

Repetition of a standard and easily recognizable front is an indispensable part of successful chain merchandising. Western Union offices, the A & P and Woolworth stores are familiar examples of this effective kind of architectural advertising. That the enterprising Longchamps chain is finding its own distinctive formula is evidenced by this new restaurant, the second to be built since the organization discarded the comfortable but characterless designs of its older restaurants. The Longchamps restaurants are known in New York for better than average food and serve a clientele at least moderately prosperous. The special problem in this case, therefore, was to develop a facade that looked smart, rather luxurious, but not forbiddingly so. A tasteful combination of black glass, bronze lettering, and a moderate amount of red and gold mosaic produced what was wanted: a front capable of variation without loss of character, expressing the type of restaurant behind it. A small show window contains the inevitable display of vegetables, as much a part of the Longchamps exterior as the sign, while to the left of the entrance is a large window set back a few feet from the building line. The latter can be lowered into a pocket in suitable weather, an ingenious arrangement which converts this portion of the restaurant into a sidewalk cafe with a minimum of inconvenience.

The interiors were designed by Winold Reiss, who selected as his

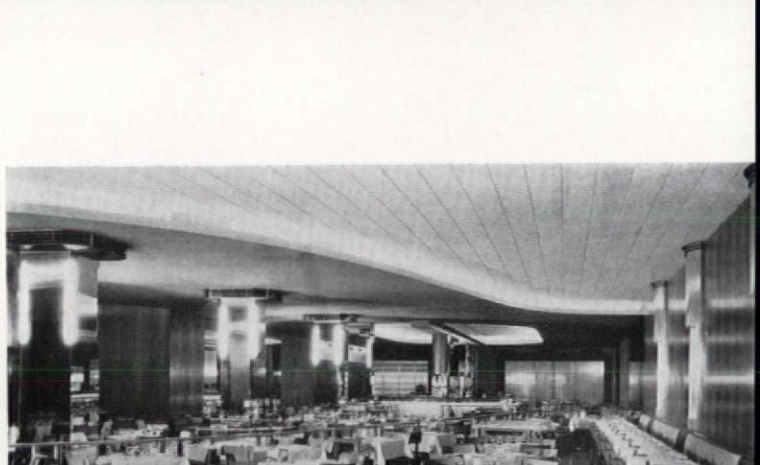
RESTAURANT LONGCHAMPS

HE PULLMAN ROOM

All photos, Robert Damora

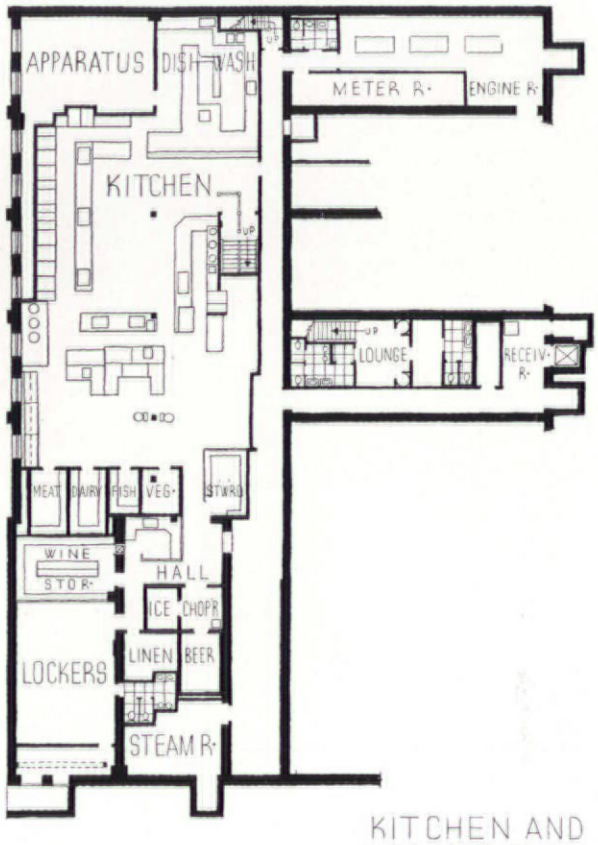
theme the American Indian. Mr. Reiss has devoted many years to a study of the subject, and has adapted it most effectively to the special requirements of the restaurant. In the two panels on either side of the bar, gold and silver mosaics, pressed into dark red plaster, amusingly depict some of the more strenuous phases in the life of the red man of a bygone era. The Indian motif is carried out in the Pullman Room with paintings by Mr. Reiss.

Really no more than a narrow passage, this room has been handled very skillfully; large mirrors and an unsymmetrical ceiling give it a convincing appearance of comfortable size. The Pullman Room is one of two small units that open off the main dining room, dividing the restaurant into four interrelated parts, thus providing considerable flexibility. The bar, set near the entrance, permits the front portion to be used as a cocktail lounge without interference with service from the kitchen. When the large window is open in summer this entire section is open to the street, and sidewalk terrace, bar, and adjoining tables become an independent element. A raised platform gives the bar prominence, at the same time effecting a separation between it and the main dining space. Irregularly spaced columns, the usual bane of large interiors, are here disguised by the use of mirrors, and their



importance is further diminished by the curve in the ceiling which marks the division between the main dining area and the other parts of the restaurant. In its effective use of space, its attractive lighting, and uncommon color scheme the restaurant is most successful. An air of intimacy is obtained, in spite of the size of interior, by subdivision into spaces of varied design by the use of rich, deep colors, and indirect lighting.

FIRST FLOOR



KITCHEN AND LOUNGE PLAN

BASEMENT

CONSTRUCTION OUTLINE

COST

$160,000, including furnishings.

DEMOLITION

Removal of existing office building stair, division walls, existing kitchens, and store fronts.

NEW EXTERIOR

Facing of polished black structural glass, by Vitrolite Sales Corporation. Extruded bronze marquise, applied signs, and show windows by Chase Brass and Copper Co., and Anaconda Copper Co. Venetian glass mosaics by Ravenna Mosaics, Inc.

RESTAURANT WALLS

Flush veneered wood paneling, U. S. Plywood Co., Venetian glass mosaics in two panels flanking bar, Ravenna Mosaics, Inc., flesh tinted mirrors by Pittsburgh Plate Glass Co., bronze pilasters; fabric covered surfaces.

RESTAURANT CEILINGS

Acoustical plaster and tile by California Stucco Co., Atlantic Gypsum Products Co.

RESTAURANT FLOORS

Of special rubber, manufactured by the Hamilton Rubber Manufacturing Co. Blue and tints of bright red.

PATRONS' LAVATORIES

Walls of brightly hued structural glass, by Abbott Glass Co., laid as ashlar; faience tile floors and base, structural glass subdividing partitions, and compartment doors of wood, covered with Formica.

ILLUMINATION

Generally through indirect reflectors, Beaux Arts Lighting Co. Also exposed lumiline strips placed vertically on the mirror-covered columns, Cassidy Co.

PAINTING

All ceilings in sunflex in tints of white and English vermilion. In the Indian wing, white walls, white ceilings relieved by yellow, red, and blue decorations. In the retail shop: blue ceilings and aluminum leaf walls.

CHAIRS AND TABLES

Wood and chrome, upholstered in various shades of tan and red, by Thonet Bros., and Howell Furniture Co. In Pullman wing, tables built in with the settees, tables with rubber tops and settees upholstered to match chairs.

VENETIAN BLINDS

At show windows, in red and yellow, by Abbott Venetian Blind Co.

KITCHEN

All equipment of stainless steel, excepting ranges, broilers, etc., by Garland Manufacturing Co. Colt-Autosan dishwasher, York refrigeration, C. V. Hill refrigerators, Sedgwick Roto-Waiter, serving from wine room to bar.

AIR CONDITIONING

York Ice Machinery Corporation.

RESIDENCE OF GEORGE TROFAST-GILLETTE

SALISBURY, CONNECTICUT

GEORGE TROFAST-GILLETTE, ARCHITECT

EDWIN FARLOW, LANDSCAPE ARCHITECT

In 1741, the town of Salisbury, located in the "Great North Woods," was auctioned off at Hartford, Connecticut, with His Excellency the Colonial governor as auctioneer. Deacon Hezekiah Camp, a resident of East Haven, acquired a parcel of 500 acres, and in 1746 he built this house, which explains how a Third Period New Haven house is to be found a state's width away from salt water. In the two centuries that followed it was farm, tenant farm, rural speakeasy, and finally abandoned. It takes more than neglect and abuse to ruin a solidly built New England farmhouse, and the problem of restoration, in spite of rotted columns, leaking roof, and lost doors, was chiefly one of tightening and patching. Fragments found in the attic allowed trim and sash to be reproduced; beaded clapboards of the period, of which only a few survived, replaced the later ones. The huge chimney was intact, requiring little restoration except above the roof, and the limestone foundation walls, two feet thick, were as solid as the day they were laid.

Inside the house comparatively little was changed. The cellar became an entrance hall with an adjoining bath and the kitchen a dining room. Two small chambers were made into a large living room, and a new kitchen, the width of the chimney, was placed between them. Upstairs, with the exception of the installation of a bath, the plan was left intact.

At some period in its occupancy, the living room had been plastered and papered. When paper, plaster, and lath were removed, the original paneling, unwittingly protected in this manner for perhaps eighty years, was discovered. The fireplace had been bricked up and the inevitable stove-pipe hole cut in the panel above; in the restoration the fireplace was opened and the paneling repaired. The beams and floor joists were still in excellent condition, and the original doors and hinges were put in working order.

All of the inside partitions, halls, and stairs were of white pine, feather-edged. These were fortunately well preserved; some had been calsomined, others were covered over with tattered wallpaper directly applied. During the restoration some of the paneling was removed while the frame was tightened, straightened, and then set back in place. The woodwork responded remarkably well to cleaning and waxing, and much of the atmosphere of the house is due to the rich mellow color of the wide boards.

The dining room, originally the kitchen, has a large fireplace with a solid oak lintel still plastered on the fire side to prevent charring. Here, as in the living room, the woodwork has been painted white. Other changes in the house include the removal of the east porch, a Greek Revival addition, and the conversion of the old woodshed into a screened porch open on four sides making a spacious summer living room. An arbor, a new addition, screens the house and garden from the entrance drive.

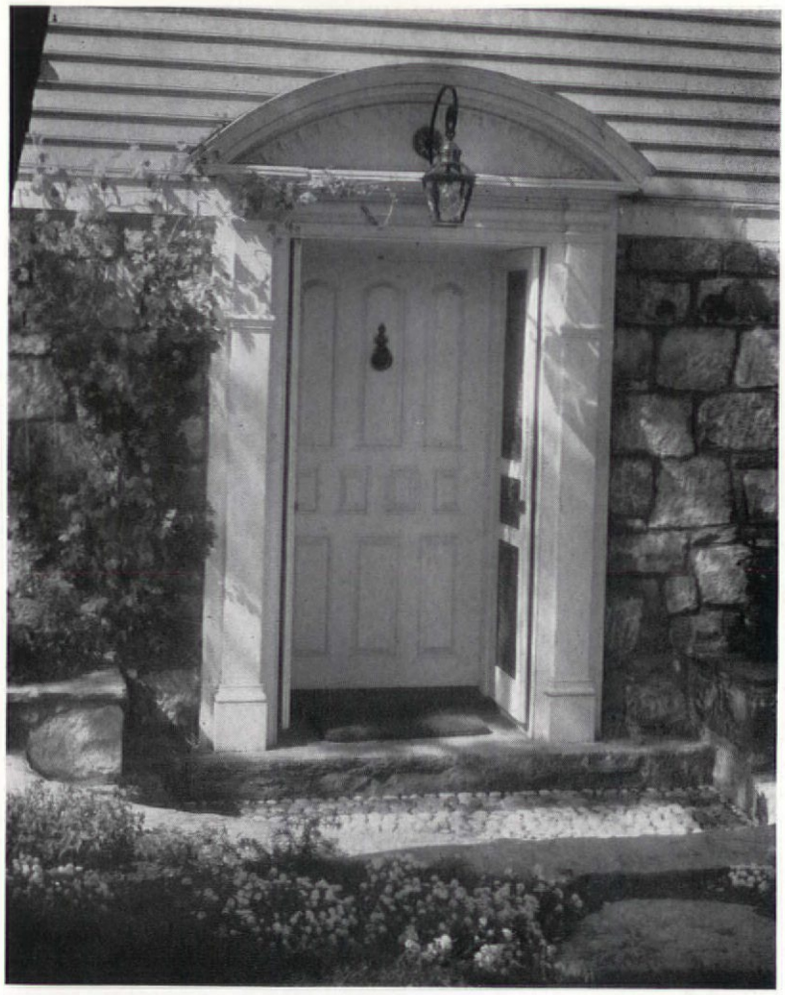
GEORGE TROFAST-GILLETTE HOUSE, SALISBURY, CONN.

AFTER REMODELING

All photos, R. W.

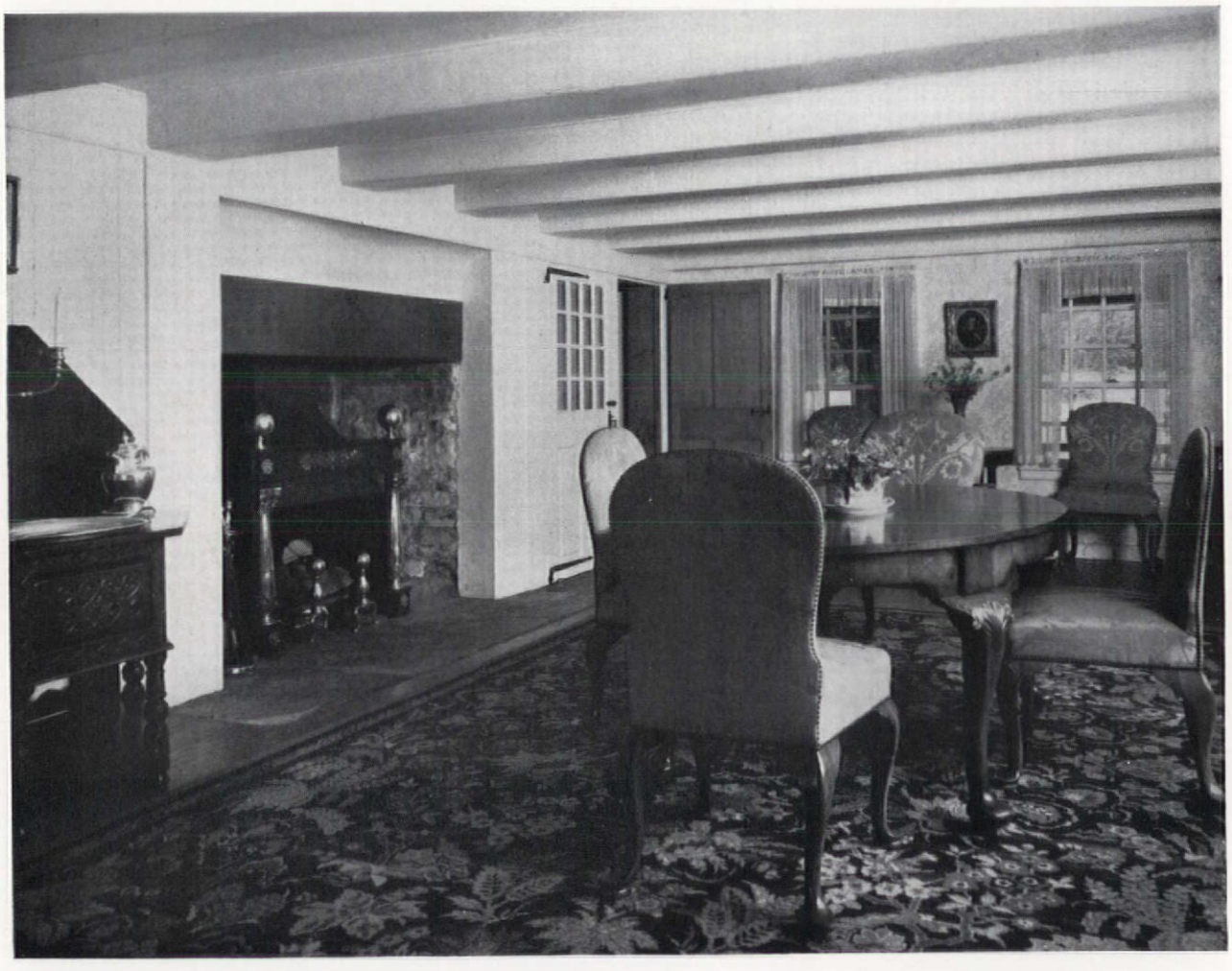
BEFORE

The photographs on the opposite page illustrate with what accuracy the spirit of the old house has been preserved. In the vigorous proportions of the mass, the subtle insistence on the edges of the clapboards, the sparse windows jutting heavily out of the walls, are seen those qualities of style which unmistakably mark out the work of one period as distinct from that of another. Here the job was one of restoration more than remodeling. It was a case of careful and expensive reproduction of original details that had survived, and it meant that a few conveniences had to be sacrificed to maintain certain characteristic features, a price that must always be paid for preserving or recreating the past in a house of the present. When living requirements are modest, as here, and the old house is worth preserving, the price is not too high. The illustrations on the right show two views of the front door. The screen problem has been well solved by the use of louvered doors, screened on the back, which fold back against the deep reveals in the heavy limestone foundation wall. They not only present a more attractive appearance than the customary expanse of wire mesh, but, if used for ventilation at night, provide more security. The entrance opens out on a semicircular area, paved with colored pebbles from a neighboring brook. The landscaping has been most successfully handled, with wild shrubs in profusion contrasting with the neatness of the traditional lawn and garden. The New England garden is a delicately balanced transition from a surrounding landscape to the geometrical precision of the Colonial house. It is as appropriate a solution in its way as the more widely known garden of the Japanese. Flimsy and timorous as is the 1936 "Colonial" house by comparison with the authentic architectural quality of this original, the copy could nevertheless be vastly improved if as much thought were expended on its landscaping as has been done here.

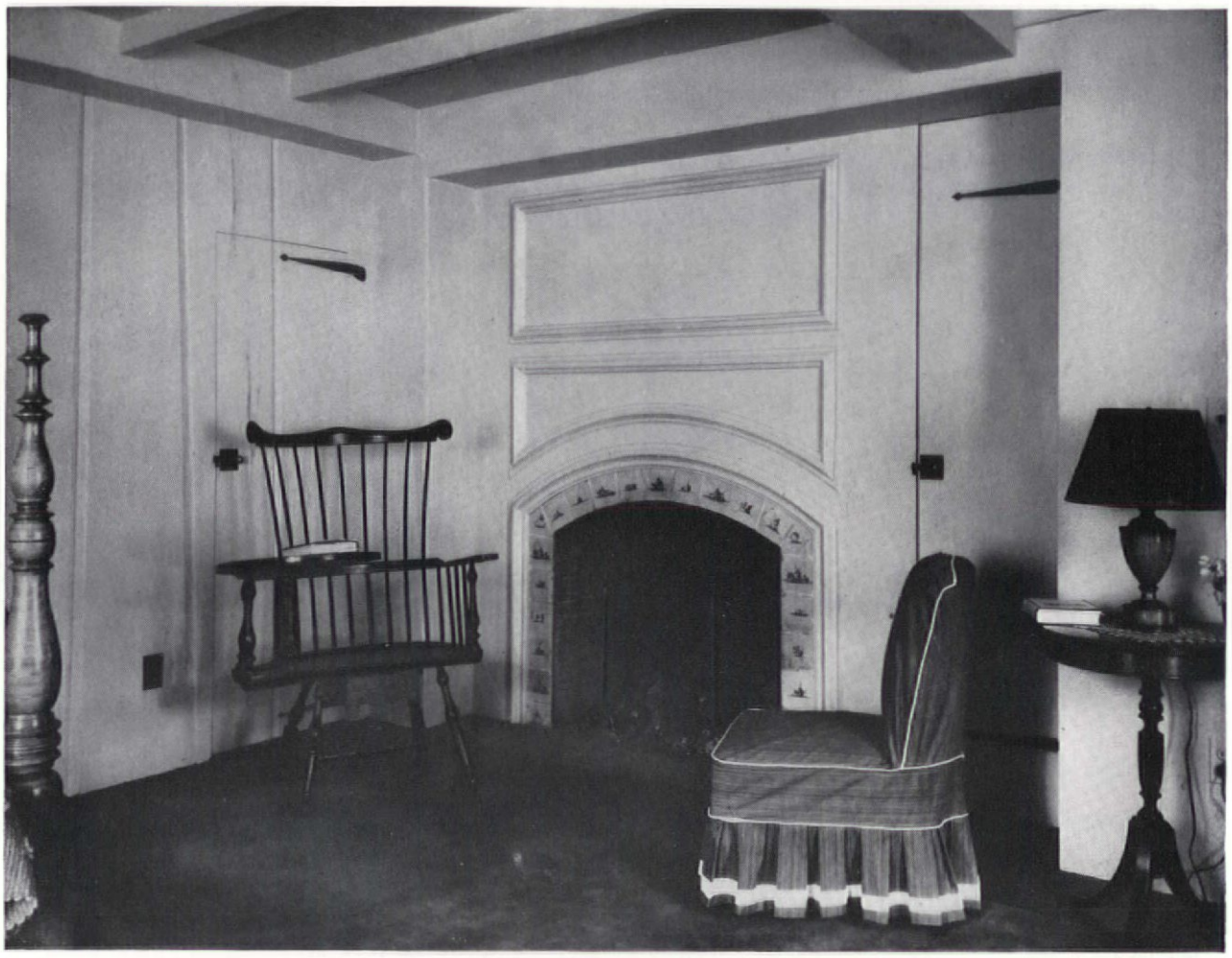


GEORGE TROFAST-GILLETTE HOUSE, SALISBURY, CONN.

LIVING ROO



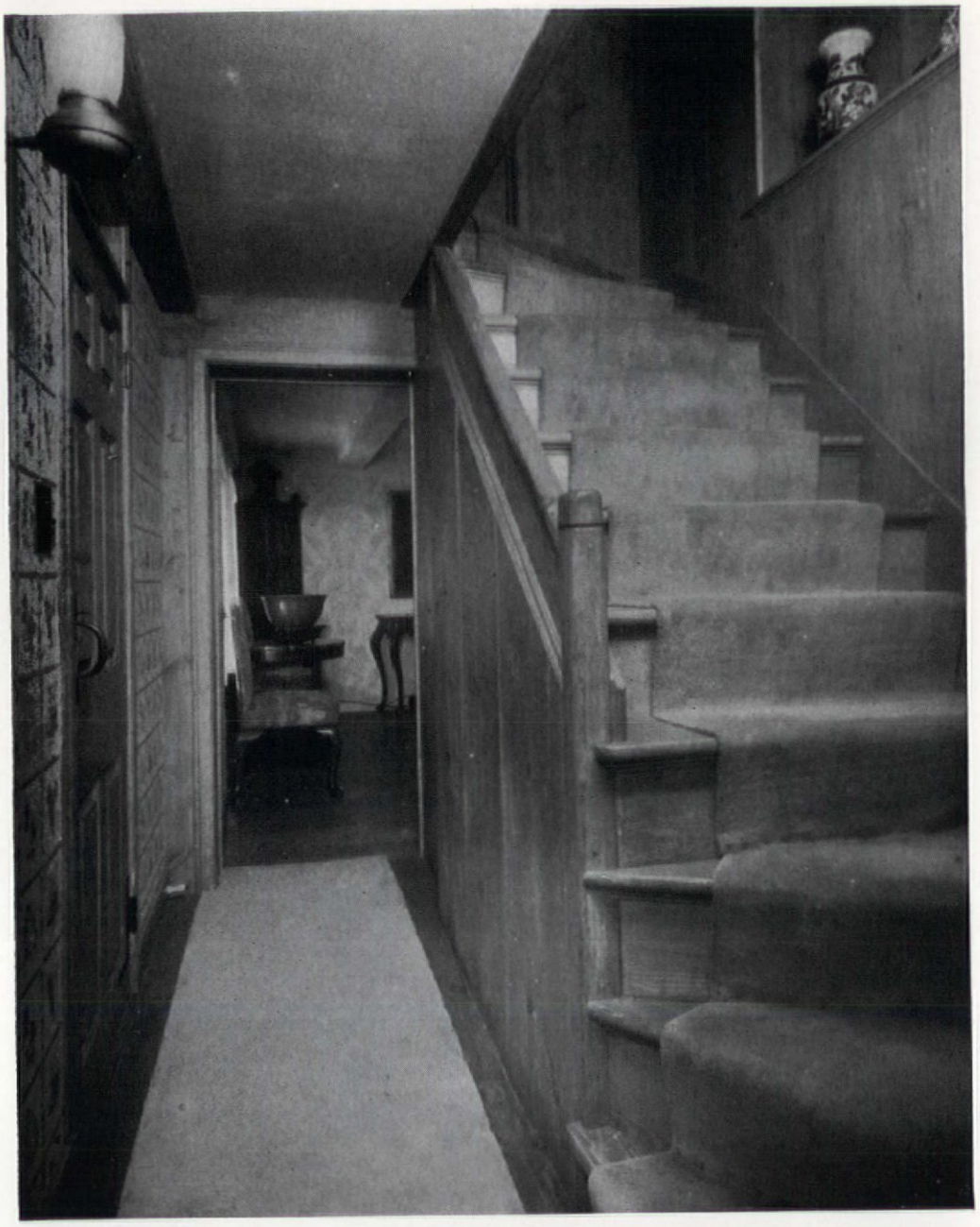
DINING ROO



EDROOM
FIREPLACE

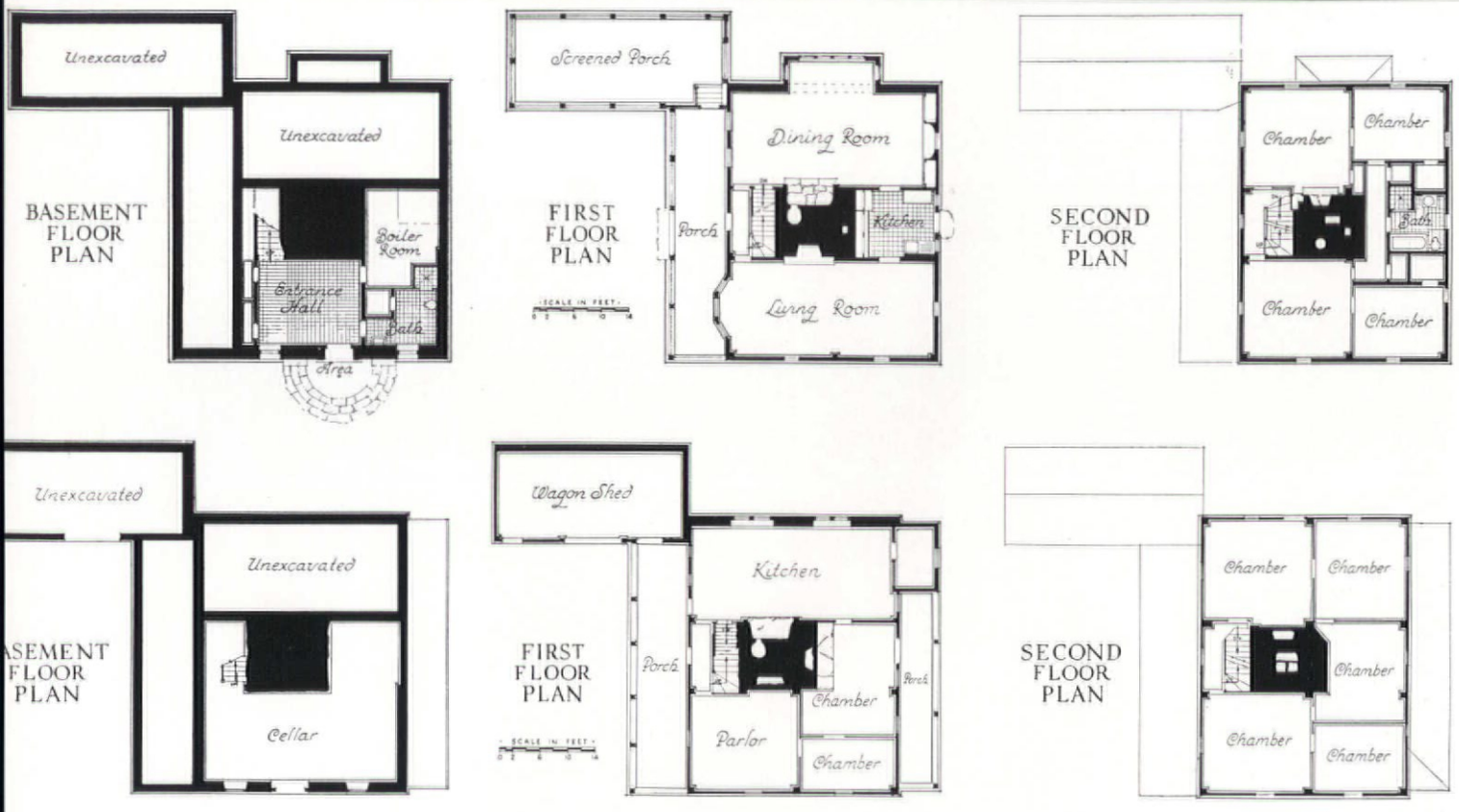
BEDROOM

GEORGE TROFAST-GILLETTE HOUSE, SALISBURY, CONN.



STAIR HALL

HALL



CONSTRUCTION OUTLINE

FOUNDATION
Footings, Walls } Native limestone
Cellar floor—concrete, Saylor's Velvet Cement
Waterproofing—liquid Elaterite, Elaterite Products Corp.

STRUCTURE
Frame—white Oak
Sheathing
Walls, Roof } white pine

EXTERIOR SURFACE
Clapboards—white pine, special detail

ROOF
Composition shingles—Williamsburg asbestos, Mohawk Asbestos Shingle Co.
Copper—lead-covered, Chase Copper & Brass Co.
Gutters, Leaders, Flashing } copper, Chase Copper & Brass Co.
Salt glazed tile drains

FLOORS
Living room, Sleeping rooms, Halls } white pine
Kitchen, Bathrooms } inlaid cork tile, Armstrong Linoleum Co., Lancaster, Pa.
Cellar—Aragon tiles, Mifflin Hood Co.

DOOR AND WINDOW FRAMES
Double hung, Casement, Door and frames (exterior) } white pine

PORCHES
Stone
Comb grain yellow pine

GLASS
English Crown Glass and Bullions, Leo Popper, New York
Leading and frames, Henderson Bros., New York

EXTERIOR PAINT
Siding, Trim, Sash } Priming, Finish coat } Cabot's Doublewhite, Samuel Cabot, Boston

LATH AND PLASTERING
Lathing
Metal—Bos-Rib, Bostwick Mfg. Co., Niles, Ohio
Plastering—U. S. Gypsum Co.

INTERIOR WOODWORK
Floors—white pine, dining room white oak random 6 to 10
Trim, Paneling } white pine
Shelving and cabinets—white pine kitchen cabinets, Kitchenmaid, Andrews, Ind.

INSULATING
Roof rafters—Celotex
Weatherstripping—Kane Mfg. Co., Kane, Pa.

INTERIOR PAINTING
Floors—Natural Pine, Idol Wax, American Woodstain Co., Roselle, N. J.
Trim—painted woodwork, Cabot's Doublewhite, Samuel Cabot, Boston
Wallpaper—Katzenbach & Warren, A. L. Diament, New York, N.Y., Thos. Strahan, Chelsea, Mass.

ELECTRICAL SYSTEM
Cable—BX
Switches—Toggle type
Outlets—Bryant

LIGHTING
Fixtures—Cox, Nostrand & Gunnison, New York, N. Y.

PLUMBING
Kitchen
Sink—Standard Sanitary Mfg. Co.
Cabinet—Kitchenmaid, Kitchenmaid Corp., Andrews, Inc.
Stove—Universal Electric
Refrigerator—Frigidaire
Bathroom
Lavatories, Bathtubs, Toilets } Standard Sanitary Mfg. Co.
Cabinets—Charles Parker Co., Meriden, Conn.
Seats—C. F. Church Mfg. Co.
Showers, Glass doors } Fiat Metal Mfg. Co., Chicago
Wall finish—Newtile, Asbestos, Ltd.

PIPES
Soil—cast-iron, Central Foundry Co.
Supply—all brass, Chase Copper & Brass Co.
Vents—galvanized steel, National Tube Co.

HEATING
Electric Radiators
Hot water heater—Bauer Automatic Electric Storage, Bauer & Co., Inc., Boston
Radiators—Erskine Mfg. Co., Bridgeport, Conn.

CHIMNEY
Lining—Terra cotta
Fireplaces
Facings—Antique Delft Tiles, C. H. Vanderlaan, New York, Dutch tiles, Maastricht Spinx, Maastricht, Holland
Hearths—Hood Briquettes, Mifflin Hood Co.
Mantels—white pine
Damper—Covert
Franklin Stoves—Edwin Jackson, Inc., New York

HARDWARE
Interior, Exterior } hand-wrought iron and brass, W. C. Vaughn Co., Boston

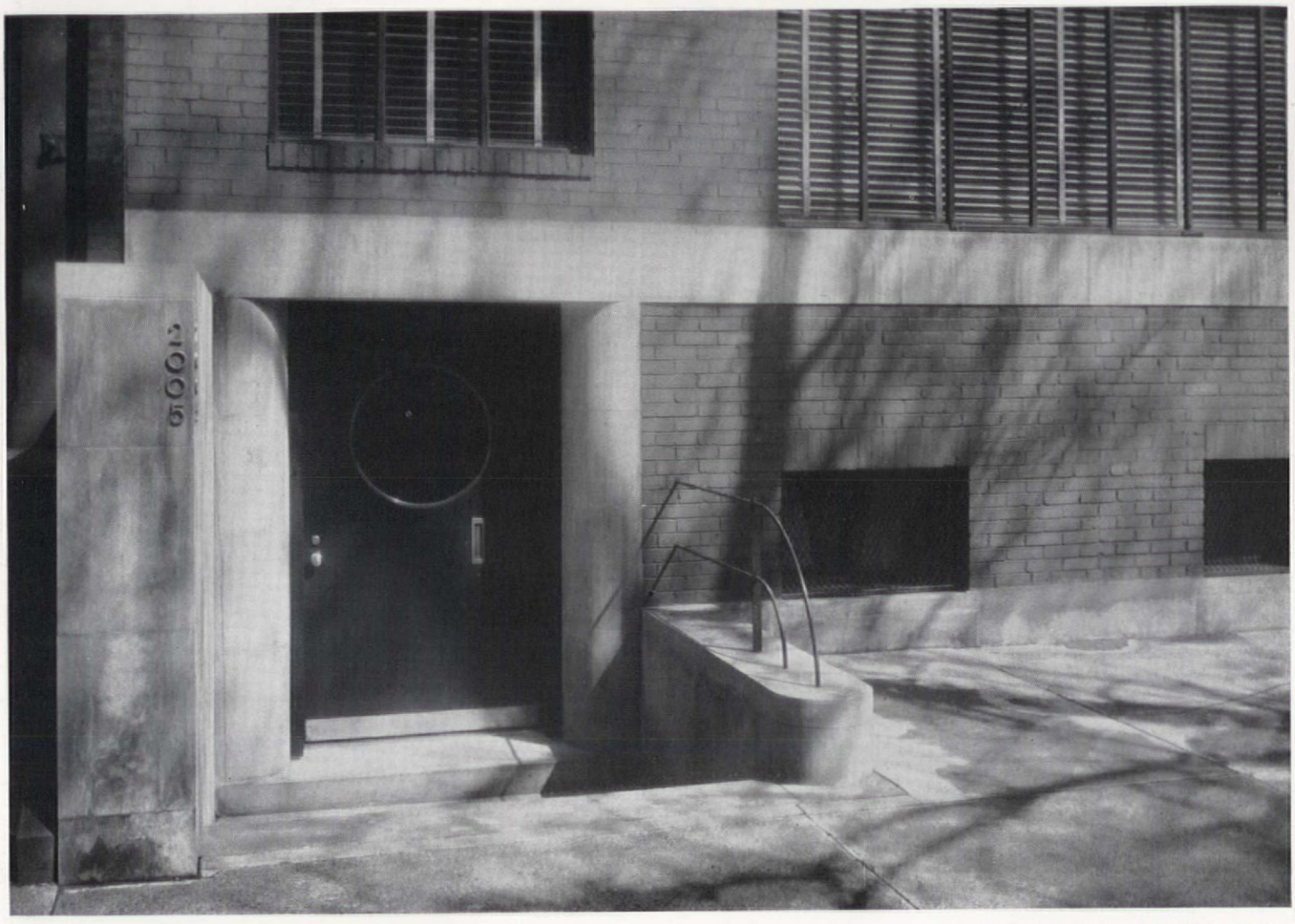
SCREENS
Rolling-screens, Watson Mfg. Co.

WINDOW DRESSING
Venetian blinds—Swedish Venetian Blind Co., New York

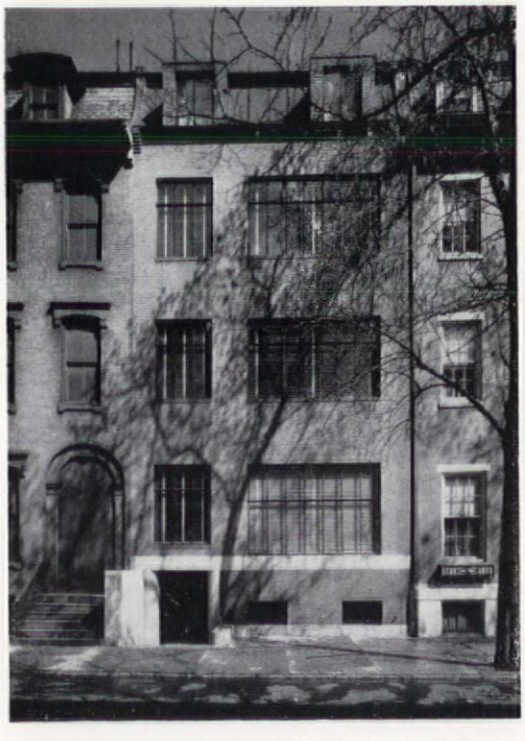
HOUSE FOR MAURICE J. SPEISER

PHILADELPHIA, PA.

GEORGE HOWE, ARCHITECT



DETAIL OF MAIN ENTRANCE



Before alteration the facade was a replica of the brownstone front shown to the left in the photograph. The old entrance has been replaced by a door on the level below, approached by a few sunken steps. In conjunction with the radically changed fenestration all projections on the facade were removed, and the brick painted a warm gray. A limestone wall receives the steps of the neighboring house. Sash and door are painted dark blue.

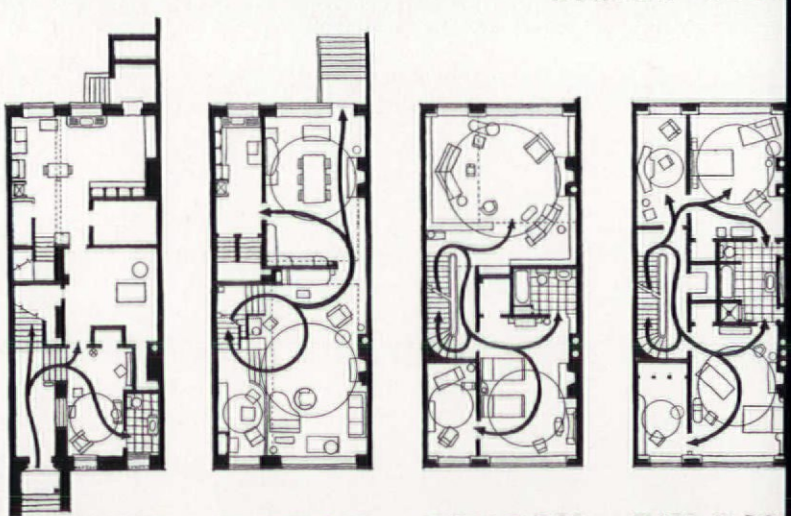
LIVING ROOM

Dooner Photos

Two things are instantly apparent in this rejuvenation of a typical Philadelphia brownstone house: fenestration has been increased by nearly 100 per cent, and the interiors have been opened up. By now these two procedures are familiar. In response to the demand for more light, particularly desirable in buildings of narrow frontage, the old windows were replaced by large casements, changing the entire character of the elevation. Within the house, everything possible was done to eliminate useless doors and partitions, creating a series of smoothly interrelated spaces. The old conception of a house as a series of tightly enclosed cubbyholes is no longer valid, since it arose primarily from by a room-by-room system of heating. The consequent need for self-contained units no longer exists. Spacious living requires spacious rooms, and in a small house this can be accomplished only by throwing as many rooms as possible into one area. The open plan is a necessity if modern home life is to exist in an atmosphere of tranquillity. Esthetically this functional requirement opens up new vistas: movement replaces a static balance of forms,

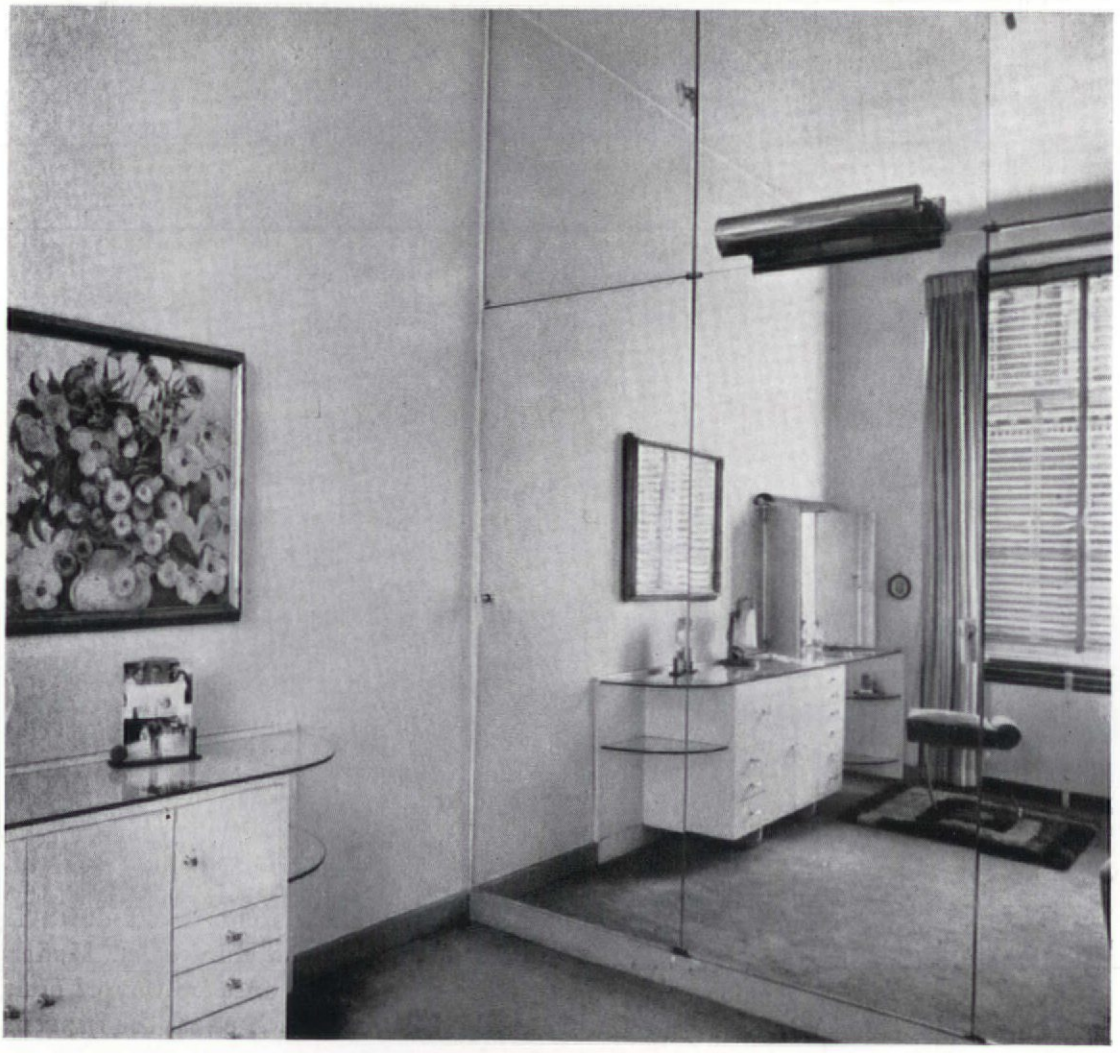
MAURICE SPEISER HOUSE, PHILADELPHIA, PA.

DINING ROOM



and interest arises from the studied and knowing interplay of intersecting planes. In the Speiser residence, wall surfaces have been left untreated, because they produce a more restful interior and because they provide an ideal background for displaying the owner's large collection of pictures. Where areas are not completely separated the same wall color and carpet is continued. Modern furniture is used throughout; much of it being built in. The plans, with circulation diagrams, are shown above.

BEDROOM



DRESSING ROOM

RAINBOW ROOM ROCKEFELLER CENTER, NEW YORK

F. S. Lincoln Photos

Highest of New York's swank night clubs, the Rainbow Room looks down from its 65th story perch in Radio City over the magnificent panorama which is its chief asset. Modern, like most post-Repeal ventures, it boasts a color organ, a revolving dance floor, and, by way of contrast, chandeliers. To the Speakeasy Generation, inured to smoke-filled catacombs, it offers the supreme luxuries: high ceilings, and windows to look out of. Off the Rainbow Room is a series of small cocktail lounges, quiet, well-furnished, with generous windows.

COCKTAIL LOUNGE

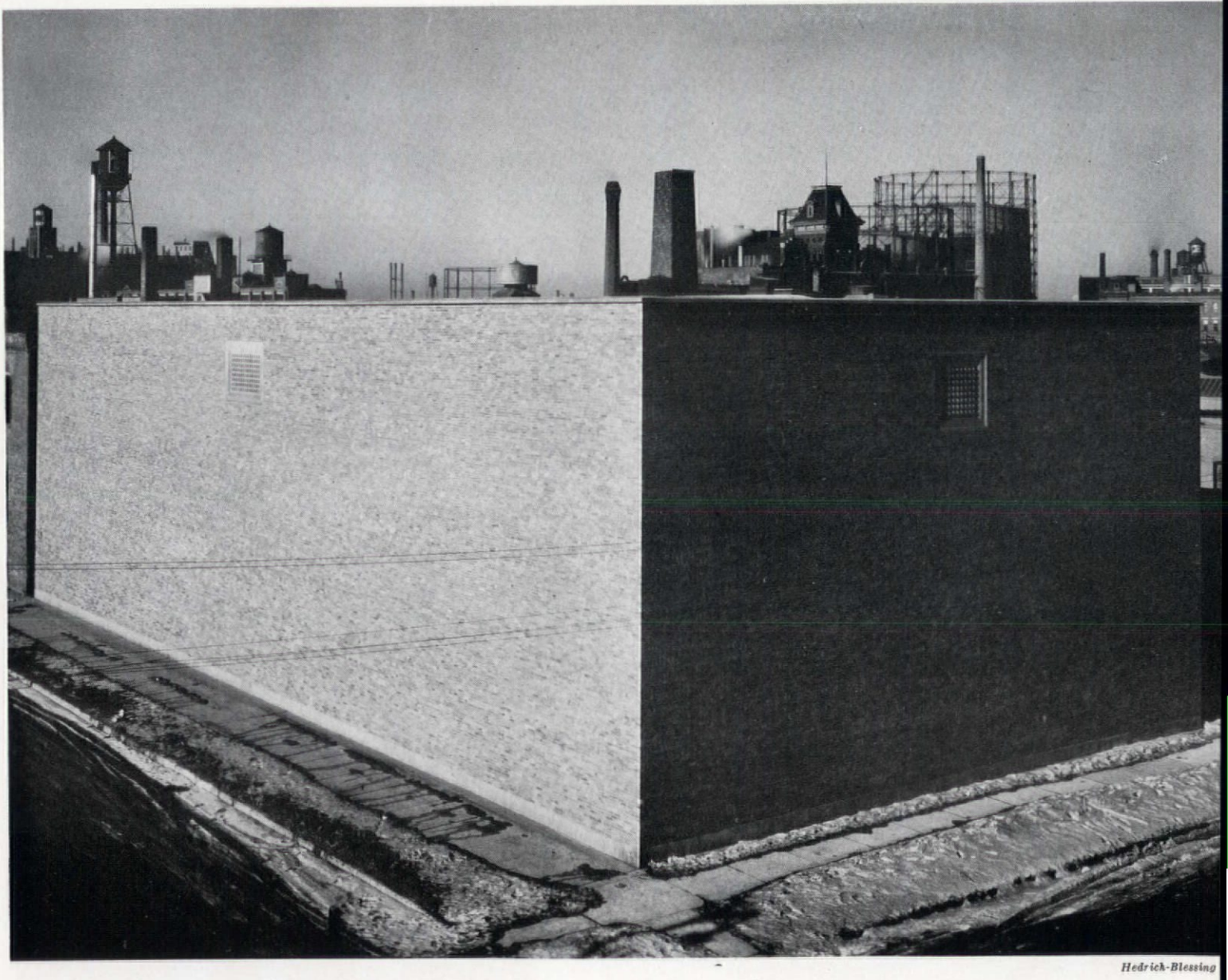
DETAIL OF LOUNGE

TENNIS COURT FOR JAMES SIMPSON, JR., CHICAGO

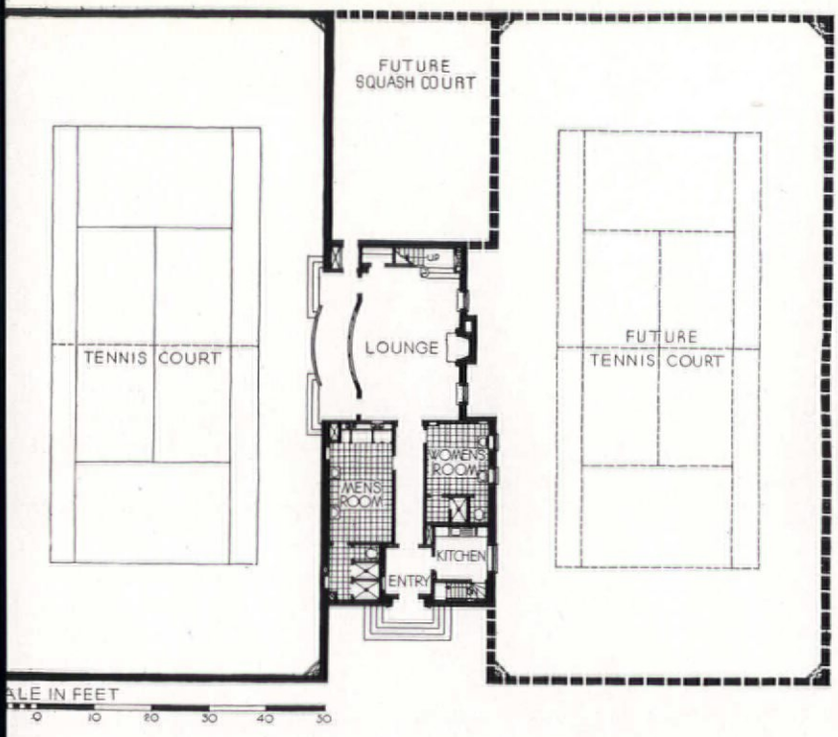
GRAHAM, ANDERSON, PROBST & WHITE, ARCHITECTS

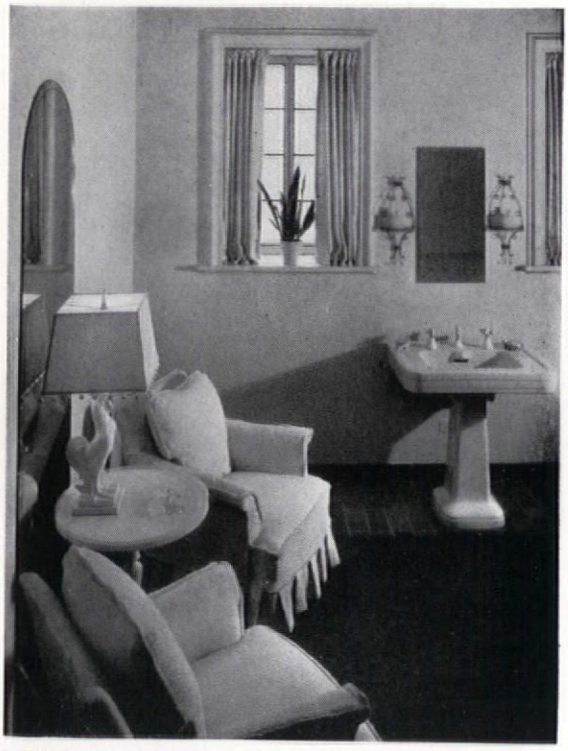
There are several ways of covering a tennis court; of these a box is the simplest to erect but most difficult to treat effectively. Located in one of Chicago's less attractive districts, the tennis court building is a curiously noncommittal cube, its plain brick surface relieved only by two stone plaques. The court has been planned to permit the construction of a similar one next to it, to be connected by the lounge. Completion of this unit will create a group of more interest than the present building, in its detached and incomplete state, would indicate.

Little hint of the luxurious quality of the interiors is given by the external treatment. The court is made of chemically treated shale on a cinder bed, with a thin layer of top dressing on it. The utmost care has been taken to avoid glare. Lighting comes from the sides only. In the center of one of the long sides is located the lounge, with one spectators' gallery in front and another upstairs. The dressing rooms are well appointed but small, since the number of players who might use them at one time is necessarily limited. A kitchen and heating plant complete the services.

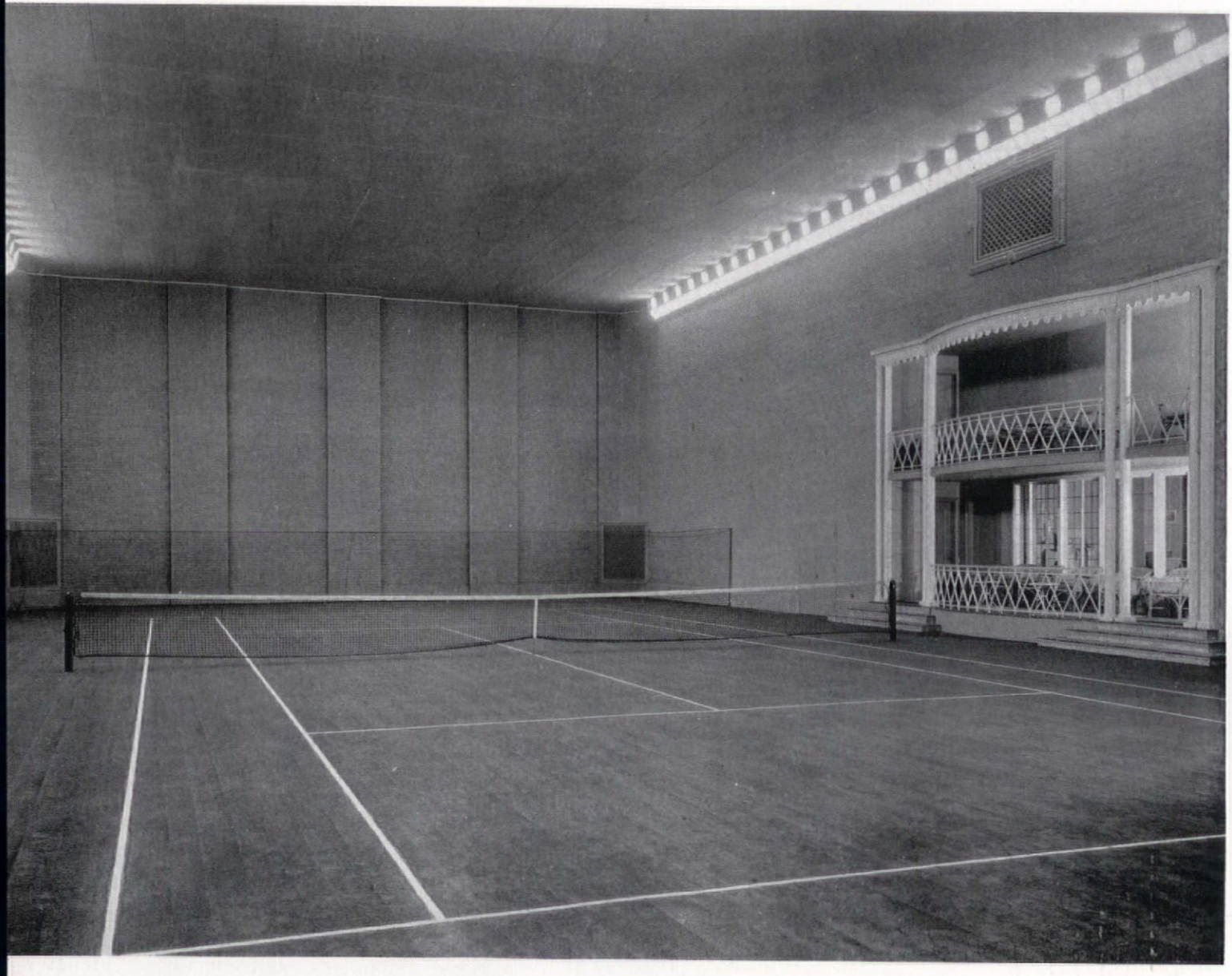


Hedrich-Blessing

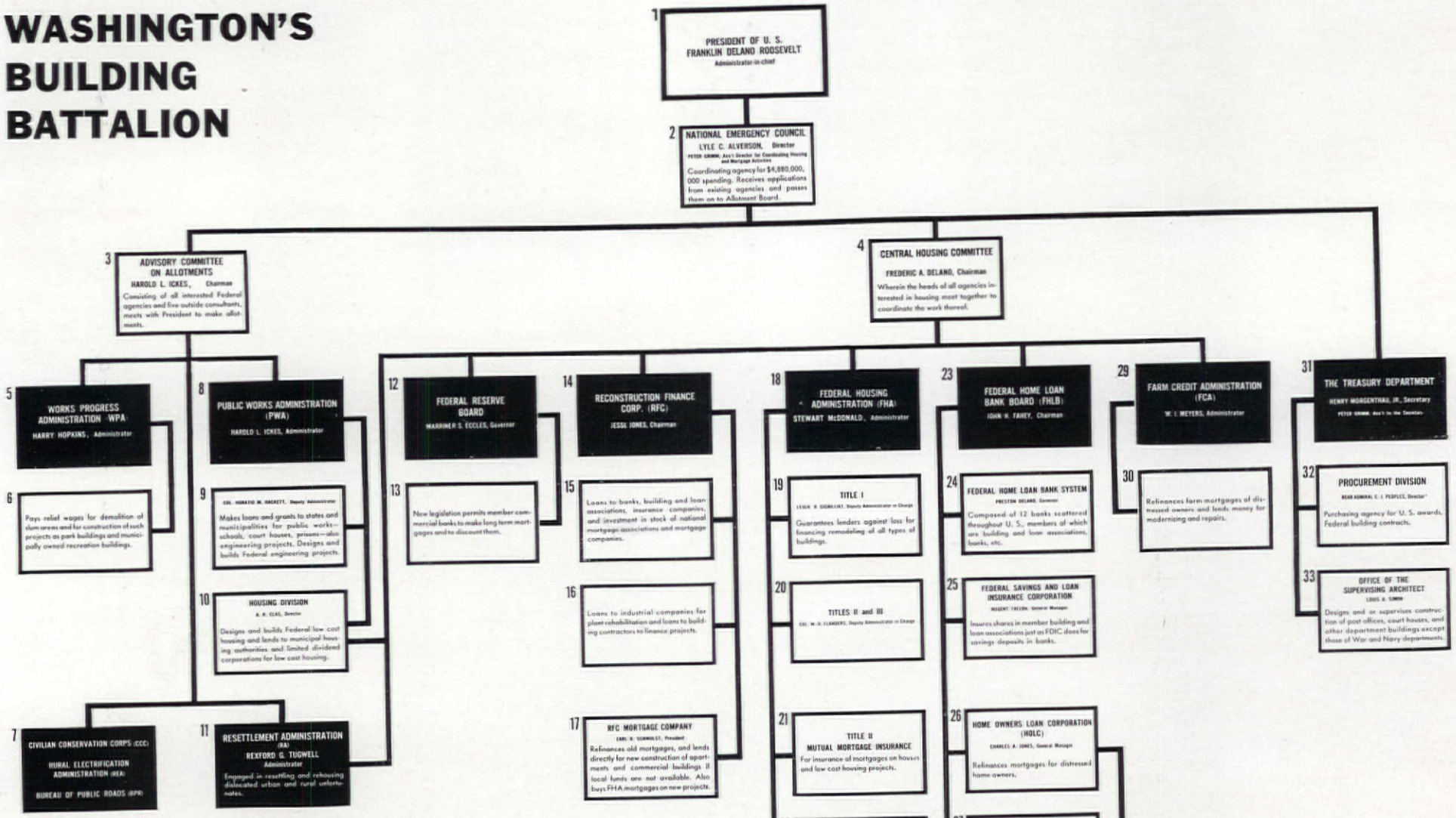

FUTURE
SQUASH COURT
TENNIS COURT
LOUNGE
FUTURE
TENNIS COURT
WOMEN'S ROOM
MEN'S ROOM
KITCHEN
ENTRY
ALE IN FEET
0 10 20 30 40 50



POWDER ROOM



WASHINGTON'S BUILDING BATTALION



MOVES OF THE MONTH

1. Promised to help stimulate the production of houses selling below $5,000, boomed prefabrication as the production method (see page 3).

4. Planned to meet February 1 to discuss the President's small house plans.

8. Had but 5,158 persons directly employed on all projects late month before last. Two hundred and fifty-four were employed on $23,633,000 worth of housing projects. No better report was expected until Spring.

12. New board members due to be named early this month; regulations enforcing Banking Act's realty loan provisions will be issued shortly thereafter.

17. President Schwulst's resignation expected momentarily.

18. Arthur Walsh named Assistant Administrator. In a double shift, former Field Director William D. Flanders first replaced Mr. Walsh as head of Title I, then assumed Deputy Administratorship of Title II, replacing Resignee Robert M. Catharine (ARCH. FORUM, Jan., 1935, p. 66). Leigh R. Gignilliat succeeded Mr. Flanders as head of Title I.

25. Began year with record of 1,387 applications for insurance, 1,099 associations insured. Three-fourths of the latter are Federal savings and loan associations, required by law to insure.

27. Announced development of a statistical series to present data on home building costs in 70 cities at three-month intervals.

BUILDING MONEY

A monthly section devoted to reporting the news and activities of building finance, real estate, management and construction

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Wide World

Men of the Month POSNER, CUMMINGS and BARKER (see Page 132)

NEW YORK POINTS THE WAY

out of the mortgage morass. An historical examination of the Mortgage Guarantee, plus an introduction to the Mortgage Bank, direct from a two century run in Europe.

IT WAS a matter of grave national import when on February 4, 1933 a baldish young man named Frederic J. Fuller, just drafted from New York's Central Hanover Bank & Trust Co. to be president of the New York Title & Mortgage Co., took pen in hand to ask the holders of his company's guaranteed mortgages to accept an interest rate cut from 5½ per cent to 4. The action of this, the second biggest of the guaranteed mortgage companies, marked historically the precipitation of that guaranteed mortgage landslide, which, in March, 1933, helped finally to knock the props from under every bank in the country.

Capitalism hit a big air-pocket with the guaranteed mortgage crash in New York. A three billion dollar letdown in the U. S. debt structure could not have occurred without the reverberations which it brought. The resulting crack, with only hasty moratoria to calk it, did not quit with devastating a business in which some of New York's best citizens were engaged: it shot through all mortgages, biggest class of investment in the U. S.

For more specifically, the guaranteed mortgage crash was the breakdown of a system of financing city-building. Guaranteed mortgages and their blood brothers, mortgage bonds, made possible skyscrapers, mammoth apartments and office buildings, and the collapse of such instruments contributed largely to the lethargy in building which still has the industry wondering if it ever is to return to those proportions which for a decade were called normal.

Instrument. The mortgage question was once as simple as a playwright's mind. You had the poor but honest mortgagor in a wide-awake bonnet and a suit of blue jeans, the rich but ruthless mortgagee in a plug hat and a cigar and the old homestead with the hitching post out front and the yellow setter sitting on the stoop. In the second act it all looked dark and hopeless but in the third act Joe came back from the Klondike, paid the five thousand dollar note and married the mortgagee's pretty daughter in the downstairs hall.

That was about 1880. Fifty years later not even a dramatic critic would have thought it was the same play. The mortgagor was the Montparnasse Apartments, Inc., the mortgagee was an alphabetical list of Masonic Homes, savings banks, young ladies' colleges, mature gentlemen with safe deposit boxes, retired dentists, and professional trustees, each possessed of a piece of paper labeled "First Mortgage 5½ per cent ten-year sinking fund gold bond" — and the old homestead was a vast limestone facade with a Louis Quinze mansard roof, a doorman in the uniform of the Batavian guard and a Frigidaire in every pantry. Moreover there was no Klondike, no Joe and no daughter. Instead there was a bond-holder's protective committee, an elaborate and more or less meaningless circular issued by the investment house which had sold the bonds and an almost total absence of cash money.

The change in the significance of the word mortgage is a change in two directions — a change in plot and characters and a change in scale. The first is evolutionary. As the cities went up the requirements of mortgagors went up with them until there were no longer enough individual mortgagees to supply the sums required. The consequence was that mortgage notes were first split up into participations and divided among a number of lenders, and later replaced in large part by mortgage bonds.

Bonds. The mortgage bond is a curious instrument. In theory it is merely a fraction of the mortgagor's obligation secured by a fraction of the mortgage. That is to say, in theory it is a participation in the old-fashioned mortgage under a new name. But in fact, due to the circumstance that the mortgagor was in many cases merely his own apartment building incorporated, the bond was much more like a share of stock in the enterprise than it was like the mortgage of the '80's. Bonds were given a lien, which the old mortgage never had, against the earnings of the enterprise. And the mortgaged property was generally valued rather upon its estimated future earnings than upon its brick and mortar value. The consequence was that the mortgagee's right of foreclosure was more theoretical than real since foreclosure meant the destruction of the going business which was the basis of the mortgage assessment.

Guarantee. Another quirk in the plot was the guaranteed mortgage.* It was a mortgage with the guarantee of the issuing company, on top of the assurance of recourse to the value of a building. First to guarantee a mortgage was New York's biggest of guarantee companies, Bond & Mortgage Guarantee Co., along about 1890. The mortgage guarantee was simply and effectively a sales-promoting device, backed up by loosely held theories as to what constituted a proper insurance reserve. And since the guaranty could be made profitable by taking mortgages at 6 per cent and selling them, duly guaranteed, at 5½ per cent, the difference going into the till of the company, the practice became general.

In the last act the plot was changed to include one further complicating feature: certificates of participation in a single mortgage, or in a group of mortgages, were issued with these companies' guarantees. Subsidiary companies were set up by the title companies to handle the guaranty business, or independent guarantee companies were established, with the result that there were, after some forty years of the business, eighteen mortgage-guarantee companies in the city of New York alone, guaranteeing $3,000,000,000 of mortgages, or 35 per cent of all the mortgages in the city.

The second change in the significance of the word mortgages — the change in scale — was a consequence of the change in plot. The *quadrupling* of the total of urban mortgages outstanding between 1913 and 1931 was not altogether or even primarily due to the increase in population (which would not numerically have justified it) nor to the increase in construction after the war. It was largely due to improvements in the salability of real estate securities. Only $50,000,000 of city real estate bonds had been offered to the public in the year after the war. But $500,000,000 was offered in 1923 and $1,000,000,000 in 1925

*This page is framed by a reproduction of a typical guaranteed mortgage certificate.

and the total finally outstanding was certainly ten billions.

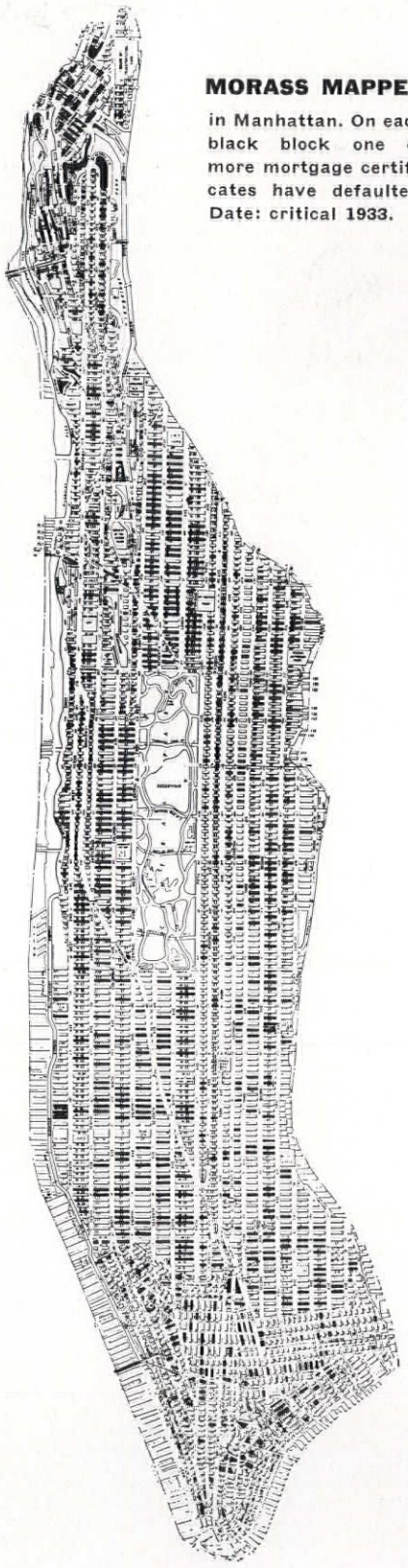
A very large part of this financing took place in the urban mortgage field. The bond houses are directly and chargeably responsible with the insane construction of unneeded office buildings and apartment houses from one end of the country to the other. The prime purpose was to manufacture more loans and thus to manufacture more mortgage bonds and thus to sell more securities and thus to make more commissions. The Real Estate Securities Committee of the Investment Bankers' Association estimates that six billions of the probable ten billions of mortgage bonds outstanding in 1931 represented loans in excess of 75 per cent of the 1931 value of the security and that three billions had been 80 per cent to 100 per cent loans *when made.*

This excess of optimism was doubly magnified in the three billions of certificates guaranteed by the mortgage companies. And whereas the decline in value of the simple mortgage was justification enough for general regret, the decline of a mortgage whose value was *guaranteed* was plainly justification for something more: public howling and legislative inquisition. Thus, in 1931 while construction teetered on the mortgage market, the mortgage market teetered on its guarantees.

The Flood. By 1932 the guaranteed mortgage companies realized their plight. Little or not at all supervised by a lax Department of Insurance, they had issued guarantees as high as 40 times their capital (ARCH. FORUM, April, 1933, p. 26), and even then had mostly stowed the guarantee funds away in mortgages. The process of deflation which had in three years, and by 18,000 foreclosures, liquidated $1,100,000 of non-guaranteed New York mortgages stood piled up smack against the obstruction of the guaranty. An "eighteen months" clause gave the guarantee companies the right to stave off principal payments. But by April of that year the gauge so clearly read DANGER that a committee was quickly formed and sent to see the President about it.

For this committee, headed by Savings Banker Lewis Gawtry, President Hoover did exactly nothing.

In February of 1933, however, week after New York Title's Fuller mailed his bland admission of his company's status, Mr. Hoover got busy and formed a Realty Stabilization Corp., in which the RFC and New York banks were to have joined together to refinance the guaranteed mortgage issues. Passed out as a life saver to the public through popular Owen D. Young, this organization nevertheless gracefully retired just after the Banking Holiday and the Roosevelt induction, holding the need for its existence over. It had passed out one dubious loan to the Prudence Corporation. The mortgage guarantee companies had closed with the holiday, to be opened again only under a strict set of rules prescribed by the Insurance Department.



MORASS MAPPED

in Manhattan. On each black block one or more mortgage certificates have defaulted. Date: critical 1933.

In May, 1933, the Schackno Act was passed, which permitted the Superintendent of Insurance to take over the certificated issues of the companies, and authorized the reorganization of these issues upon consent of the holders of 66⅔ per cent of each issue and the approval of the Court. In August the Department of Insurance, headed by George Van Schaick (pronounced Skoik), a Rochester lawyer friend of former Governor Roosevelt, took over sixteen of the companies, and shortly thereafter 27 more.

Meantime the Governor appointed in December, 1933, a commissioner under New York's Moreland Act to hear testimony on the situation and to report to him a course of action. Hearings lasted until June of the following year. Moreland Commissioner George W. Alger wound up his report with a list of minimum requirements for the conduct of a guaranteed mortgage business in the State.

Year ago last month the Governor's State Mortgage Authority Bill was passed, providing for a Commission which, in finally working out the problem, was also to prepare another set of recommendations for the future conduct of the mortgage business in the State.

Picked from among numerous candidates to head up this final drive, the Commission's chairman, Wendell P. Barker, was for a year previous to his appointment counsel to the Joint Legislative Committee, in which capacity he helped to draft the Mortgage Commission law. A specialist on insurance law, his appointment has been considered another demonstration of Governor Lehman's ability to pick men fitted for their jobs. Florid-faced and mustached, he is friendly to all he meets. Queried by reporters on the night of his appointment, he remarked: "It's a headache, but I'll be glad to do my best."

Commissioner Lawrence B. Cummings, a New York realty broker, ceremoniously severed all his business connections shortly after his appointment. Suave and an excellent speaker, he is a fast thinker, and has rendered valuable service as a member of the advisory committee which Lawyer Van Schaick had wisely set up to help steer a course through the guaranteed mortgage mess. As vice president of the real estate firm of Douglas L. Elliman & Co. he had served as president of the Real Estate Board of New York. The third commissioner, Lawyer Louis B. Posner, brought to the Commission the results of considerable experience in mortgage relief work which he gained as chairman of New York's Municipal Committee for the Relief of Home Owners.

Last month the Commission, with $265,000,000 of the $800,000,000 of defaulted issues reorganized, had already finished its advisory task: that of furnishing the 1936 legislature with a program of future mortgage banking in the State.

The problem faced by the Commission is twofold. On the one hand it must make available a source of funds out of which owners of real estate and builders can borrow money secured by real estate. On the other it must provide an avenue for the investment of earnings in a safe and income-producing security.

On July 15, 1935, the legal staff of the Commission, composed of Maurice Finkelstein, LeRoy B. Iserman and Benjamin J.

Rabin, began their search for a solution.

First decision was that the old guarantee mortgage company, no matter how stringently delimited by law, could not be revived. The Moreland Commission's findings to the contrary, the Mortgage Commission felt that the guarantee mortgage debacle had been too spectacular, and it would require too long to regain public confidence in its operations.

None of the other finance bodies now in existence seemed to the Commission either of sufficient financial size or of sufficient responsibility to undertake, as had the guarantee companies, to underwrite the major construction of New York City.

The alternative was to form a mortgage bank. This type of bank is essentially a foreign phenomenon. It provides an established method of financing in Europe and in some parts of South America and has been in successful operation since the end of the 18th century.

Theory. In theory the mortgage banks divide themselves into three groups: the Germanic, the Napoleonic, and a hybrid resulting from the crossing of the Napoleonic with the Germanic. The first known mortgage bank was the Schlesiche Landschaff, founded by Frederick the Great in 1769. This bank was the progenitor of the so-called Germanic type of mortgage bank. Its distinguishing features were that it was subject to Government supervision and that in nature it was cooperative, i.e., its members were also its mortgagors. Historically the Germanic mortgage bank became numerous, invested mostly in rural mortgages, and was confined largely to Prussia. Economically, its course has been unhappy: in depressions the members were too inclined to be indulgent with themselves as mortgagors, and time after time the State has found it neccessary to step in with subsidies.

The first mortgage bank in France was the Credit Foncier, founded in 1852 on the initiative of a Polish banker-economist named Louis Francois Wolowski. In forming this institution Wolowski took for his inspiration the Germanic type of mortgage bank, and modified it in two important respects to form the so-called Napoleonic type. The Credit was corporative rather than cooperative, i.e., it was a joint stock company in which the stockholders were *not* also the mortgagors. And it went a step further than the Germanic type by having Government control rather than Government supervision. The Governor of the bank, in whose hands the management is concentrated, is appointed by the Government. Originally by law, now by prestige, the Credit Foncier enjoys the sole right of mortgage bond issue in France. It is today perhaps the most successful mortgage bank in existence.

In 1862 the Germans developed a modification of the French, corporative adaptation of the original Germanic type of mortgage bank. Taking over the essential features of the Napoleonic mortgage bank, they modified Government control to Government supervision, this supervision generally being exercised by a Government agent in the bank with powers approximating those of a trustee.

Upon the pure Napoleonic type of mortgage bank and the later German adaptation of it is modeled practically every mortgage bank in the world today. And the records of these banks has been one of continuing stability. (See table, p. 135.)

Practice. 1. European practice recognizes that land alone, generally speaking, is the basis of the mortgage encumbrance. No individual liability is recognized in connection with the debt.

2. Commercial banking and mortgage banking are separated in their functions, both by law and by custom. Major exception to this theory is in Germany, where the "mixed" banks used to comprise perhaps one-half of all banks, nowadays account for less than one-third.

3. The amount of the bond* issue must always be in substantial equality with the mortgage credit volume. Both the Napoleonic and the Germanic types of banks allow the use of funds other than those arising from bond issues for investment in Government securities. But the proceeds of bond issue must at all times be invested in mortgages.

4. Loans are amortized and made only on first mortgages, except in a few cases in Germany. The opposition of the Germanic type of mortgage banks to amortization rests on the fact that a great many urban loans are made by the speculative builder who has no desire to undertake a long-term commitment which puts him at the mercy of a possible future rise in money prices. On the other hand the thinking behind the Napoleonic theory argues that to discourage speculation is salutary, and that the repurchase of bonds through amortization tends to raise the value of the outstanding bonds.

5. The registration of title in State records is universally compulsory. This is a basic tenet of both types of mortgage banks.

6. Every country and both types of banks prescribe a minimum "guarantee capital." In Germany the volume of mortgage bonds cannot exceed 20 times the amount of capital, including open reserves. In France the original ratio of 20-1 was raised, in 1922, to the extraordinary figure of 50-1. This ratio can be only partly justified by the presence of complete Government control. Reference to the table on p. 135 will show it to be more than twice the average.

7. The ratio of the assessed value of a property to the amount of credit extended on it is legally limited. For urban property it runs from 50 per cent in France to 66⅔ per cent in Belgium.

8. Loans may be made only on real estate which produces a regular revenue equal to more than the annual service of that loan. The requirement seems superfluous until the habit of certain guarantee companies of issuing bonds on foreclosed property is recalled.

9. Short-term credit may not be used as a basis for bond issues. The exception to this was Switzerland, and its unhappy experiences in 1931 proved the wisdom of the rule. The legal term for investment runs from ten years minimum in most countries all the way up to a maximum of 75 years (France).

10. Bond issues may be designated as trustee securities by the State in Germany and in Austria. Under the Napoleonic system, with the Credit Foncier enjoying a monopoly of issue, this is not feasible. In Holland, the Postal and Savings banks accomplish substantially the same thing by posting a list of those issues which are eligible for investment in their accounts. Obviously, this concept of the designation of trustee securities by the Government tends to raise the standard of bond issues throughout the country, and in effect amounts to a degree of negative regulatory power by the State.

Conclusion. Such broadly were the basic theories and practices which presented themselves to the Mortgage Commission in its study of the European phenomenon of the mortgage bank. Of all the institutions surveyed, the Commission looked with most favor on the most successful — the Credit Foncier of France. But it was immediately apparent that its monopolistic, Government-regulated features were not suited for use in New York State, both by reason of the low estate of the civil service and of the general distrust of Government-in-Business. Thus they turned to the German adaptation of the Napoleonic mortgage bank, which substituted Government supervision for Government control.

The Bank. Premature announcements made it appear that at one point the Commission envisaged a State-controlled mortgage bank, but this was undoubtedly a misapprehension arising from the Commission's loose use of the term "State Mortgage Bank."

What the Commission finally evolved and what last month they were prepared to present to Banker-Governor Herbert Lehman was a recommendation for a bank or series of banks empowered to deal in mortgages.

If their recommendations are approved by the Governor, as seems likely, and not modified by the State legislature, as seems a bit less likely, these banks will have the following attributes:

¶ They will be the only bodies in the State

*The mortgage bank "bond" has all the attributes of a debenture: each obligation is against the entire resources of the bank, rather than any specified parcel of land.

MORTGAGE BANKS IN FOREIGN COUNTRIES

Country	*Bank*	*Type*	*Year Established*	*Loans made as of the end of 1930, unless otherwise indicated*	*Debentures issued as of the end of 1930, unless otherwise indicated*	*Required ratio between appraised value of property and permissible amount of mortgage loan*	*Ratio of debentures permitted to be sold to mortgages on hand*	*Ratio of outstanding debentures to capital of bank*
ARGENTINA	Banco hipotecario de Buenos Aires	State	1886	Pesos—1,651,347,338 (1933)	Pesos 1,590,385,625 (1933)	50%; over 200,000 pesos 40% ind. 30% corp. 25% amusement pl.	100%	
BRAZIL	Bank of the St. of San Paulo	Private	1909		£ 3,520,000			
	Credit Foncier du Brezil	Private	1906		F. Fr. 70,000,000	50%	100%	10-1
	Banco hipotecario de Minas Geraes	Private	1911		F. Fr. 20,000,000	50%	100%	10-1
CHILE	Caja de Credito hipotecario	State	1855		Pesos 698,592,400; U. S. $72,037,500; Sw. Fr. 13,982,000; £ 65,245 (1933)	50%	100%	
	Banco hipotecario	Private		Pesos—325,548,396 (1934)	Pesos 322,632,500		100%	20-1
COLOMBIA	Agricultural Mortgage Bank	State	1925		U. S. $16,700,000; £ 1,200,000	50%		5-1
	Mortgage Bank of Bogota	Private	1910	Pesos—23,558,078 (1932)	Pesos 19,810,495 (1932)	50%	100%	10-1
CYPRUS	Agricultural Bank of Cyprus	Private	1925		£ 200,000	50%	100%	
DENMARK	Mortgage Bank of Kingdom of Denmark	State	1906		$ 5,300,000 D. Kr. 10,000,000	60%		8-1
ECUADOR		Private		Pesos—10,000,000	P. 5,010,844			
EGYPT	Agricultural Bank of Egypt	Private	1902		£ 4,567,000	50%	100%	
	Mortgage Co. of Egypt	Private	1908		£ 1,750,000	50%	100%	
	Credit Foncier Egyptian	Private	1880		Sw. Fr. 75,000 000	60%	100%	
ESTHONIA		Private	1928		E. Kr. 19,000,000			
FINLAND	Ind. Mortgage Bank of Finland	Private	1924		£ 1,836,300	50%	100%	
	Mun. Mortgage Bank	Co-op.	1927		$ 15,000,000	50%		10-1
FRANCE	Credit Foncier	Private	1852	Fr. 6,632,000,000 (1934)	Fr. 5,703,000,000 (1934)	50%	100%	50-1
GERMANY	Association of Mortgage Banks	Private	1862	G. M. 2,300,000,000	G. M. 2,242,000,000	60%	100%	22-1
GREECE		State	1927		£ 2,100,000	50%		25-1
HUNGARY	Hungarian Land Mortgage Bank	Private	1863		$ 16,000,000	50%		
	National Hung. Ind. Mortgage Inst.	50% State	1928		Penga 5,000,000	50%		
	Farmer's National Mortgage Inst.	State	1879		$ 2,000,000	50%	100%	
	Hung. Gen. Savings Bank	Co-op.	1881		£ 495,000	50%	100%	
ITALY	Mortgage Bank of the Venetian Prov.	State	1927		$ 30,400,000	30%		15-1
LITHUANIA		Private	1924		Lts. 57,000,000 (1934)			
NETHERLANDS	State Mortgage Bank	Private	1902		Fl. 19,000,000 (1928)	75%		
	Rotterdam Mortgage Bank	Private	1864		Fl. 56,000,000 (1928)	75%		
NORWAY	Royal Norwegian Mortgage Bank	State	1851		N. Kr. 400,000,000	60% (rural); 50% (urban)		8-1
	Agricultural Prop. Bank	State	1903			60%		6-1
POLAND	Land Mortgage Bank of Warsaw	Private	1923		F. Fr. 50,000,000	50%		
	State Land Bank	State	1919		Zl. 280,000,000			25-1
SWEDEN	Royal Sw. Mortgage Bank	State	1861			50%		
	Town Mortgage Bank of Kingdom of Sweden	State	1909			50%		10-1
	Credit Foncier of Stockholm	Private	1869		F. Fr. 90,000,000	50%		
URUGUAY		Private	1892	Pesos—128,186,748	P. 131,204,350			26-1
YUGOSLAVIA	State Mortgage Bank	State	1862	Din. 2,205,967,827 (1934)	Din. 798,235,024 (1934)	50%	100%	

allowed to engage in the business of lending money on the security of real estate while selling securities against this real estate.

¶They will be required to have a minimum paid in capital of $3,000,000, a paid in surplus equal to the capital, and, eventually, a reserve also equal to the capital.

¶They must have a directorate of not less than five nor more than nine, whose members shall be satisfactory to the State Superintendent of Banking. And the Superintendent must approve the creation of the bank as "in the public interest."

This combination of high capital requirements and the demand for justification "in the public interest" will tend severely to limit the number of mortgage banks. On the whole this limitation should prove worthwhile. Few banks means a heavy concentration of mortgage capital. This affords the mortgage banks the chance for wide diversification of risk; makes possible bond issues large enough to be listed on exchanges (thus saving the expense of large sales forces and increasing liquidity); and allows the banks to withhold issue flotations against favorable markets. Furthermore the mere reduction in the number of banks will decrease overhead for the market as a whole, with the result that mortgage money will be cheaper than it otherwise could be.

On the other hand such limitation tends to reduce competition, thereby buoying money prices and encouraging stagnant management. And it increases the effect of State supervisory powers which, while not *per se* detrimental, may intensify objections to the bill.

¶When organized these banks will be empowered to issue long-term *debentures* carrying a fixed rate of interest and redeemable at the directors' discretion. The amount of debentures outstanding may at no time exceed 20 times the capital and surplus of the bank, nor 100 per cent of the principal outstanding amounts of the mortgages held. These debentures will be legal investment for trust funds, savings banks, insurance companies.

All these provisions are in the best tradition of European mortgage banking. Interesting is the fact that the Commission has decided to forego the regulatory powers already noted in the reservation of the right to designate trustee issues.

¶The banks will be empowered to lend money on real estate mortgages for a period of not less than ten nor more than 20 years, and such loans must be amortized at the minimum rate of 2 per cent per annum. But mortgages may not be made on more than 60 per cent of the appraised value of the property.

There will be considerable opposition to the 60 per cent limitation on loans. While this limit conforms closely with the standards which have proved so efficacious abroad, it fails to take into account the virtues of some current U. S. thinking on the subject which insists that loans may well be made in some cases on as much as 80 per cent of appraised value. Furthermore this provision puts the State mortgage bank out of gear with the appraisal ratio of the Federal Housing Authority, which guarantees at 80 per cent.

¶The banks will be empowered to rediscount their mortgages "with any Federal Bank that may hereafter be created." The Commission is obviously cocking a hopeful

Wide World

Senator Lazarus Joseph

eye toward Senator Duncan Fletcher's measure for just such a bank, to be introduced some time this session. But this tendency to legitimatize a dodge which rightly is reserved for emergency seems of dubious wisdom.

¶The banks shall pay dividends to stockholders so long as neither surplus nor reserve funds are impaired.

From the foregoing it will be seen that what the Commission envisages is a corporative bank in the Napoleonic tradition, empowered both to discount and to lend, and supervised by the State in the Germanic tradition.

Appraisal. A long time favorite as goat for the mortgage debacle has been the appraiser, on the theory that had he not been so optimistic, the capital structure of the mortgage market would not have been so full of water.

Aware of the vital part appraisal plays in maintaining stability in the mortgage market, the Commission has requested that all appraisers be licensed, and that no mortgage bank lend on a property appraised by other than a licensed appraiser. The Superintendent of Banking would have charge of licensing and take into consideration experience, integrity, education, and responsibility.

The appraisal itself would contain, *inter alia*, an opinion regarding reproduction cost, condition of the property, financial condition of the borrower, neighborhood conditions. Furthermore the Superintendent of Banking would be able to reject within thirty days any appraisal which he deems inadequate.

Title. The case against the current method of registering titles to property is well known. The title companies are slow in operation; their policies are honeycombed with title exceptions; the premiums are high and not based on any actuarial laws; they are not transferable.

In 1908 the Torrens Act was introduced in the State legislature to cure these evils. But the statute was so emasculated by the mortgage lobby that by the time it became law it was merely permissive in nature. Based on the law then and now in force in Australia, it provided for the registration of titles in a State registrar. Title assurance was obtained by the levy of a fee. Transfer was not needed as the record was permanent. But registration was not required, only permitted.

Closely in conjunction with its measure for the creation of a mortgage bank the Commission will introduce a law completely revamping the Torrens Law. Under its provisions all titles must be registered with the State. The applicant will press his claims before a duly appointed court, which will hear his arguments just as it does a civil case. Should his claim be granted the title will be registered by the State registrar and a duplicate issued to the applicant. This duplicate will be the owner's evidence of title. Assurance will be created by the levy of a fee amounting to one-tenth of 1 per cent of the assessed value of the property.

The proposed law is, of course, a death blow for the title companies. The Commission points out that the title companies have for years conspired with the mortgage companies to jockey State title registration into oblivion, and evinces little more than judicial pity for their plight. However to make matters as equitable as possible, it proposes a ten-year period of grace before the law become effective, and hints that the State might well employ the title companies to search titles for them.

The recommendations of the Mortgage Commission are backed by some of the most scholarly research ever made in this country into the nature of the mortgage. And its proposed law is receiving potent backing. Sponsor for its bills in the Assembly will be swart, roly-poly Lazarus Joseph, chairman of the Joint Legislative Committee, chairman of the Senate Committee on Real Estate and Mortgages, and, most significantly, a right-hand man to Governor Lehman.

Introduction of the bill will be the signal for a free-for-all by many a lobbyist, and the actions of the New York Assembly are notoriously unpredictable. But the objections that can be raised against the Mortgage Commission's bill must be of a nature easily curable by minor amendment. For, considering the bill's limited objectives, its theory is sound and backed to a formidable extent by successful example.

PREFABRICATED NATIONAL HOUSES

hope soon to be in your town. All steel, and designed by the Chrysler Building's architect, they will sell for $4,000 up.

WILLIAM VAN ALEN is that colorful man whose name has come to be identified almost exclusively with the 77-story Chrysler Building which he designed. But since the day when that building's spire was for a time the highest thing in Manhattan he has busied himself in less spectacular fields. Notable has been the remodeling which he has performed on a series of Childs restaurants. Last month, having turned from skyscrapers to modern commercial design, he was ready to display to a few select people the details of yet another type of design. This time the versatile Van Alen has turned to prefabrication. Specifically he has designed a unit for an infant concern called National Houses Inc.

Sponsors. Behind National Houses, but somewhat submerged in the corporate setup, is a shrewd, energetic lawyer named B. E. Moses. Tall and middle-aged, with a shock of curly gray hair, Lawyer Moses is the completely disarming person who came out of the West, after one experience with a prefabricated house in Kansas City, and successfully promoted the company. He assumes no credit for its existence, and, waving an expansive hand, says, "Give Van Alen the credit. Me? All I want out of this is enough to take me fishing." Which is an excusable desire, since Moses admits he knows little about construction. But the fact that he is still very much a part of the organization and likely to be of more influence than anyone else in setting up its marketing organization makes Lawyer Moses' story worth the telling.

Mr. Moses became interested in prefabrication three years ago and found the cash to finance a young engineer named Miner in starting Universal Houses, Inc., in Kansas City. Universal built a house which demonstrated well the potentialities of steel framing, but failed to sell even its system to Kansas City builders. Year before last the firm broke up, young Miner continuing in business as Structo, Inc. (for Structo's system, see ARCH. FORUM, Dec., 1935, p. 570), and Moses gravitating eastward toward a system of his suiting. In January of last year he met Architect Van Alen, and the two evolved the steel house which won the approval of Lawyer Moses' financial connections.

Present head of the company is M. W. Amberg, of Lincoln Steel Products Co., New York exporters of scrap steel. Among other officers and directors are Frederick Droge, of Gaines, Droge & Co., real estate note brokers; Julian Sachs of Klein (Hoover Secretary of Commerce) & Sachs; and Edgar Greenebaum, of Greenebaum Sons Investment Co., big Chicago real estate bond house.

The House. Although there are many sets of plans, and a house under construction in Greenwich, Conn., the only concrete example of National Houses' construction method is a one-room demonstration unit in New York's Grand Central Palace. Despite its location in the city's famed exhibition center, this demonstration unit is in no sense on public display. Only to show it to an occasional prospective dealer, or to those contributing the products used in it have its sponsors opened the doors.

Bernard

Van Alen and Lawyer Moses

National's Window Panel

However, a photograph of the standard panel has been made public (see cut), and certain details given out which are convincing of its possibilities. National Houses' house is, as nearly as practicable, an all-steel house. Where many other new construction systems have developed unique assembly methods and utilized various materials, including steel in the assembling, few, for instance have eliminated the installation of window frames as a separate procedure. National Houses' window frames are stamped directly into the steel wall panels. Casements with curved corners give the windows an unusual new appeal, call again to mind the many comparisons made between the prefabricated house and the automobile.

National Houses are assembled from standard steel panels 2 ft. or 4 ft. in width and 9 ft. high, including doors, windows, corners and plain units. These form the frame and outer face of the building. They are so made that when fastened with structural clamps, no other frame is needed. Floor plans are not standardized. Houses of up to four stories in height, with any number of rooms, may be assembled, provided the length and width of the house are in multiples of two feet.

Several psychological tricks, distinctly of the sort which early made Van Alen's work attractive, set National Houses apart from other such houses which have appeared. An inward bending shelf at the top of each wall panel combines with the rounded corner units to give the house an appearance of solidity, notably lacking in previous prefabricated houses. National Houses' sponsors count this one of their smartest tricks. A second feature of which they are particularly proud is the exterior paint which Architect Van Alen developed in consultation with Du Pont engineers. Applied with a paint-gun, it gives the appearance of a fine-grained stucco, lacks the objectionable gloss suggesting metal which has characterized other prefabricated house finishes.

While construction drawings are not obtainable and exact details omitted, the following is an over-all description of the house:

Foundation. The foundation walls are waterproofed poured concrete, extending below frost line and of a thickness to comply with structural requirements for one and two story houses. Other types of foundations may be used, at option. Anchor bolts for wall panels are set in the foundation.

First Floor. This ordinarily consists of 6 in. insulating and waterproofed concrete on tamped dirt, with 2 in. of insulating, nailing concrete, which can be used as a finish floor, or to which any other type of finish, such as wood, tile, linoleum, etc., may be applied, by using a mastic, or nails.

Second Floor. The second floor is composed of combination floor and ceiling units, by use of which a resilient floor surface is obtained, with more than ample structural strength for all purposes. Finish of floors may be of any material, as desired. The under surface of the unit forms the ceiling of the story below and is painted or papered, without plastering.

Walls. Exterior walls are 4 in. thick with the sheet steel panels forming the outer face and with steel, Sheetrock, or other wallboard forming the inner surface. The space of 3½ in., between the wall surface, is filled with National insulation, a fireproof mineral that is inert and is a nonconductor of heat and electricity.

Insulation. An insulation which, according to National, is either equal or superior to other types of insulation ordinarily employed in building construction.

Roofs. Flat roofs are composed of the combination roof and ceiling unit, joined together with structural clamps and covered with 4½ in. of National insulating roofing that will not run or check, equal in insulating value to the insulation in the walls of National houses. Flat roofs may be finished, if desired, as sun decks, with cement surface.

Sloping roofs, when used, consist of 2 in. wide sections, running vertically to the ridge, designed for great architectural effectiveness. Where sloping roofs are used, ceilings are insulated with 3½ in. of National insulation and ventilation is provided under the roof.

Heating and Air Conditioning. Standard equipment adapted to either steam or hot water heating, with circulated, or refrigerated air conditioning, may be included in a National house.

Lighting and Electrical Equipment. All usual and customary electrical equipment, with convenient outlets, is included in National houses.

Plumbing. Equipment in bathrooms and kitchens may be installed, as selected from standard types, makes and colors to suit individual tastes.

Windows. Steel casements. Enclosed or open porches also are available.

Rustproofing and Finishing. All steel parts are treated with two coats of rust-inhibitive primer and all concealed surfaces are treated with National rustproofing compound, successfully tested by more than 15 years' actual use in protecting exposed steel from injury due to corrosion or rust. The exteriors of National houses are covered with National Houses' patented "Velmar" finish paint, guaranteed for five years.

By these methods, National Houses hopes to produce a structurally sound house of four rooms, fully equipped, for less than $4,000. It is, in fact, ready to produce such a house today for all comers who wish to build locally (see box). Before it can do so nationally, however, it must carry out a selling and display plan—blood of a prefabricator's life.

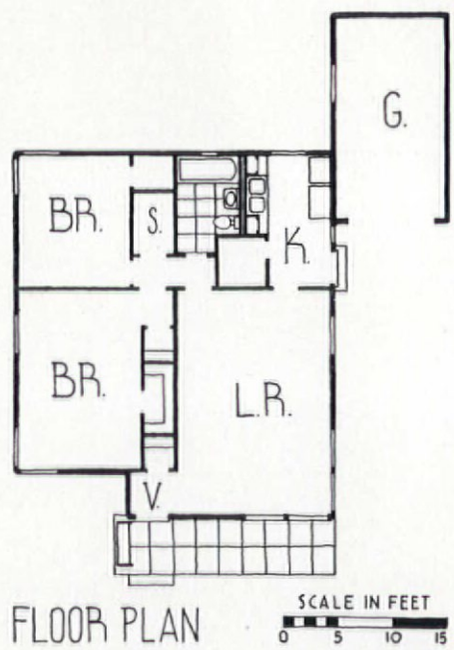
Sales. National Houses' dealer plan calls for local dealers who will develop their own assembly staffs, to which, at the points of sale, will be added the owners and architects. The architect will draw up plans for the house, using the standard units; the dealer will figure up the cost of those parts of the job which are dependent upon local conditions, and add the cost of the standard parts, his profit and the company's profit to arrive at a price. The standard parts, according to National Houses' plan, will be shipped from eight manufacturing plants located throughout the U. S. In the first phase of the company's activity, procedure will be to get as many model houses erected locally as possible through the dealers.

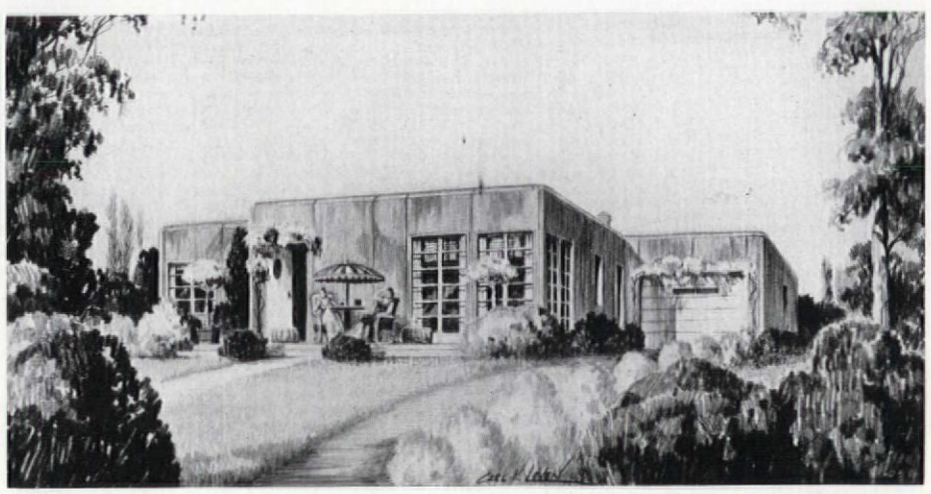
At work on the combination sales and display plan today, Lawyer Moses has engaged a credit agency to secure 1,000 names of prospective dealers. Eligible for acceptance are any who have had experience in building, realty or realty finance, and can satisfy the company as to their financial standing.

NATIONAL'S COSTS

The following are actual figures determined in estimating the selling price of National Houses' House No. 2 (see cuts), without garage, in Queens County, Long Island, New York. They do not include architect's fee, overhead, dealer's commission or profit, which however are so fixed as to permit the selling of the house at a price under $4,000.

Steel (including fabricating labor)	$ 970.34
Assembly of steel	175.00
Sash and glazing	65.00
Interior doors and hardware	55.00
Exterior doors and hardware	30.00
Insulation	40.00
Roofing	135.00
Sheet rock	192.00
Labor applying sheet rock	64.00
Foundation	262.50
Finish flooring	100.00
Electrical material and labor	75.00
Plumbing material and labor	250.00
"Velmar" exterior finish and interior paint (material and labor)	150.00
Heating equipment	275.00
Fireplace	40.00
Tile	90.00
Two exterior doors	15.00
Hardware	5.00
Gas stove	35.00
Shades	10.00
Cesspool	40.00
Landscaping	40.00
Floor scraping	20.00
Connecting water to main	15.00
Connecting gas	6.00
Survey	15.00
Building permit	5.00
	$3,174.84

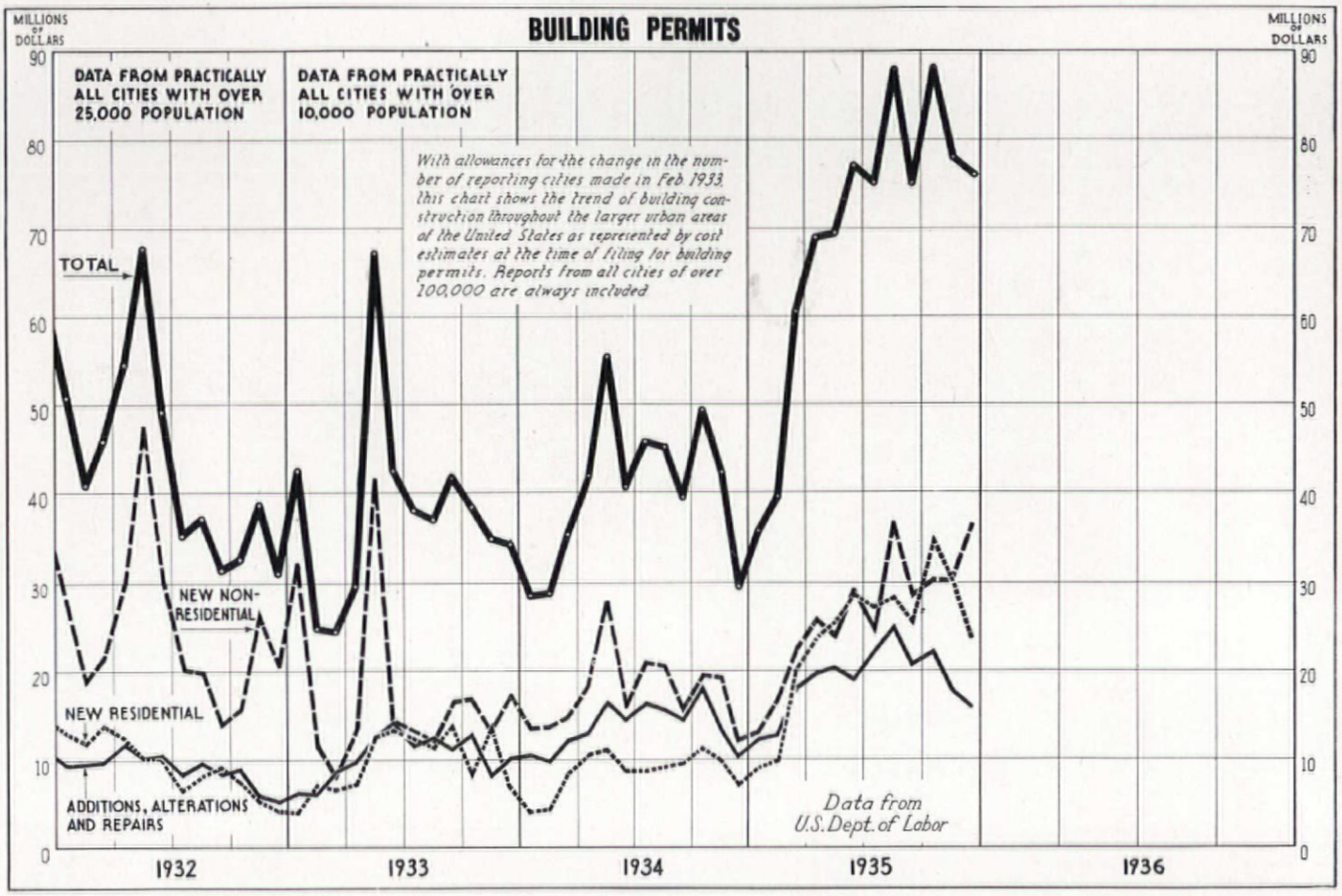


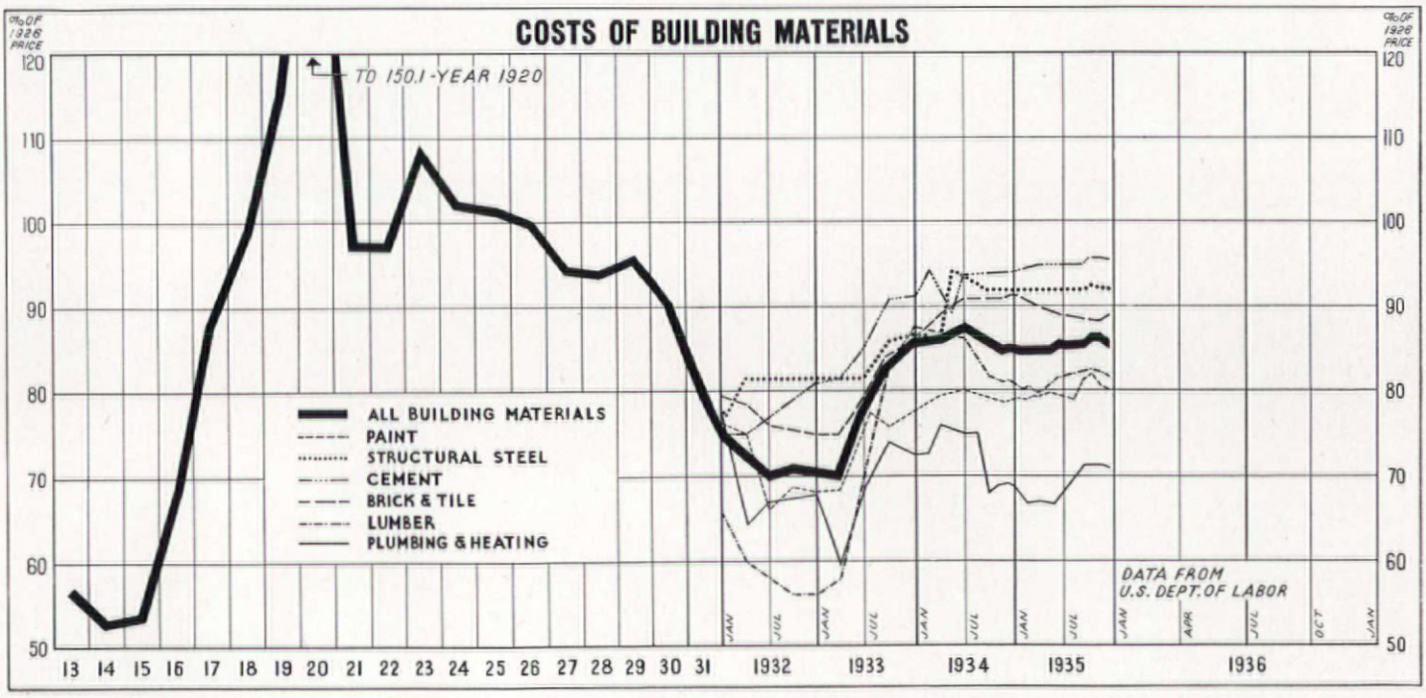


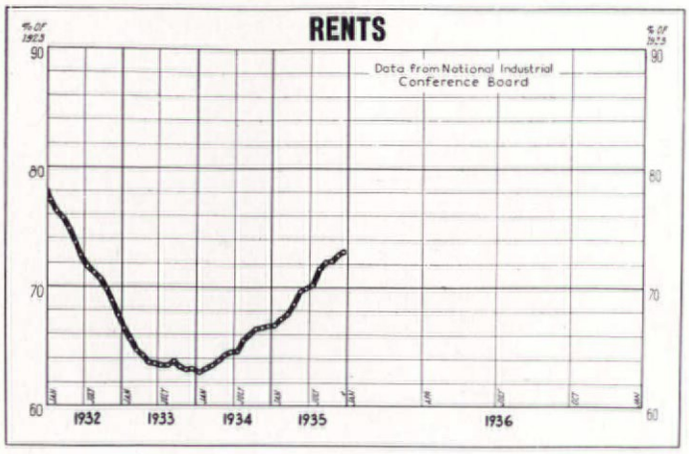
National House No. 2: Four Rooms at Less Than $4,000

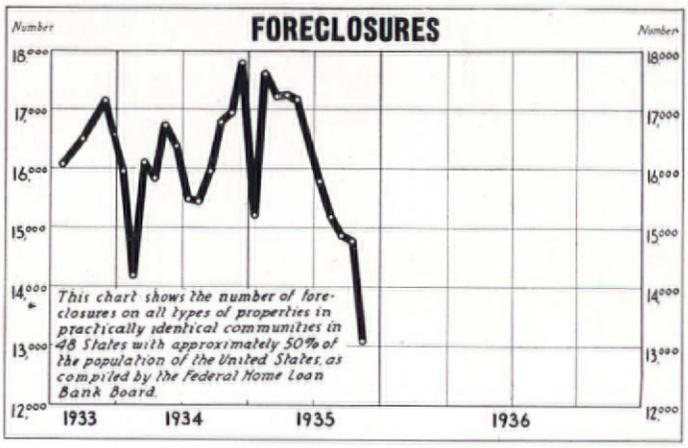
1935: PROSPERITY'S GREEN SHOOT

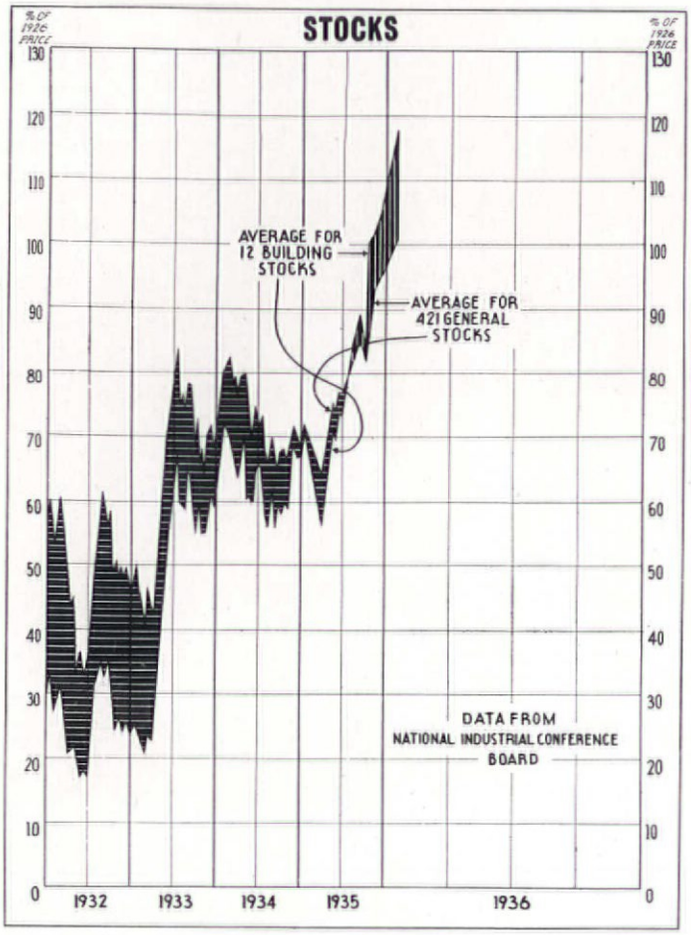
measured, and the state of the surrounding soil. A three-page parade of 1935's significant figures, with a new chart on marriages, indicator of housing demand.

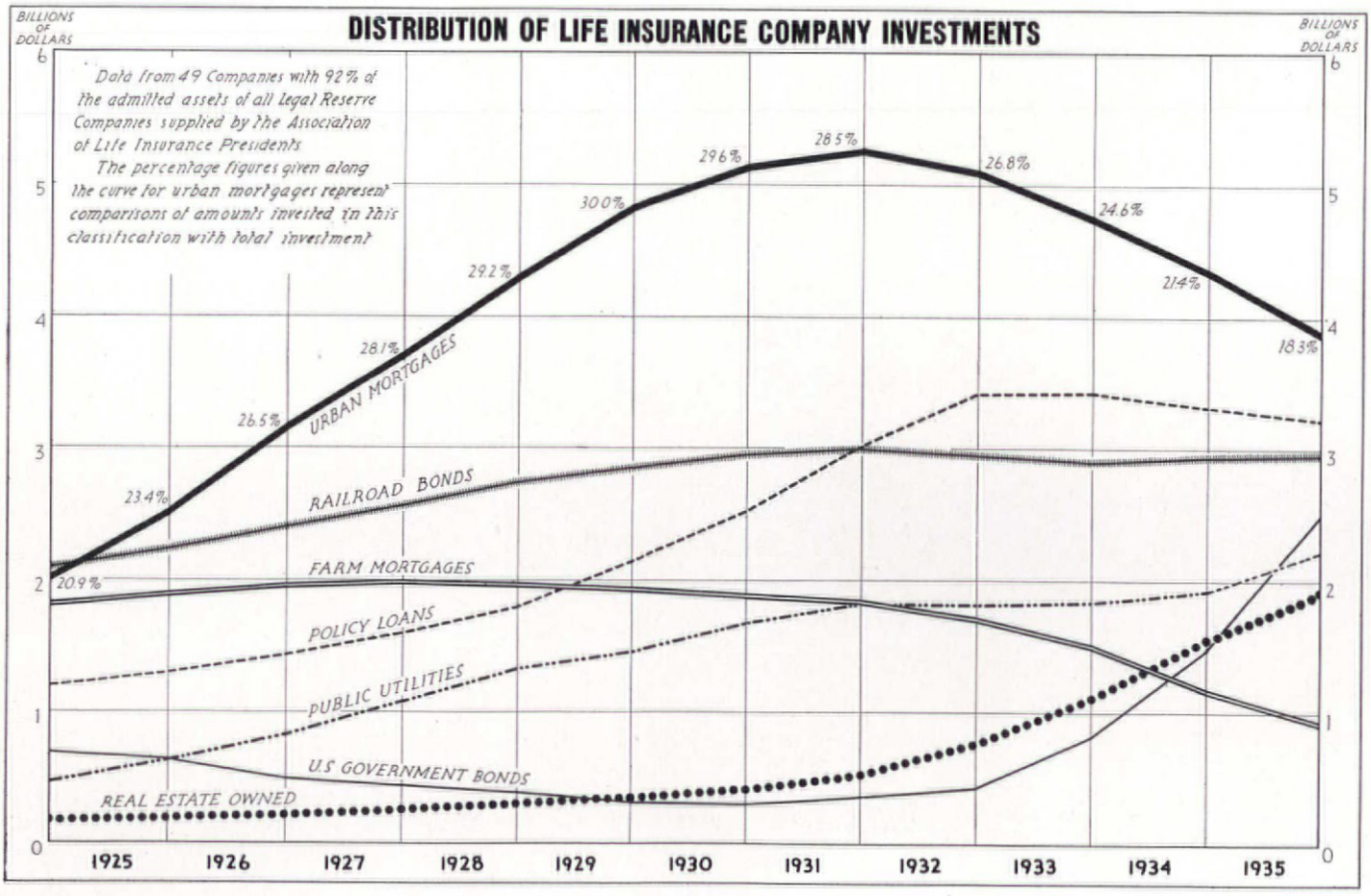


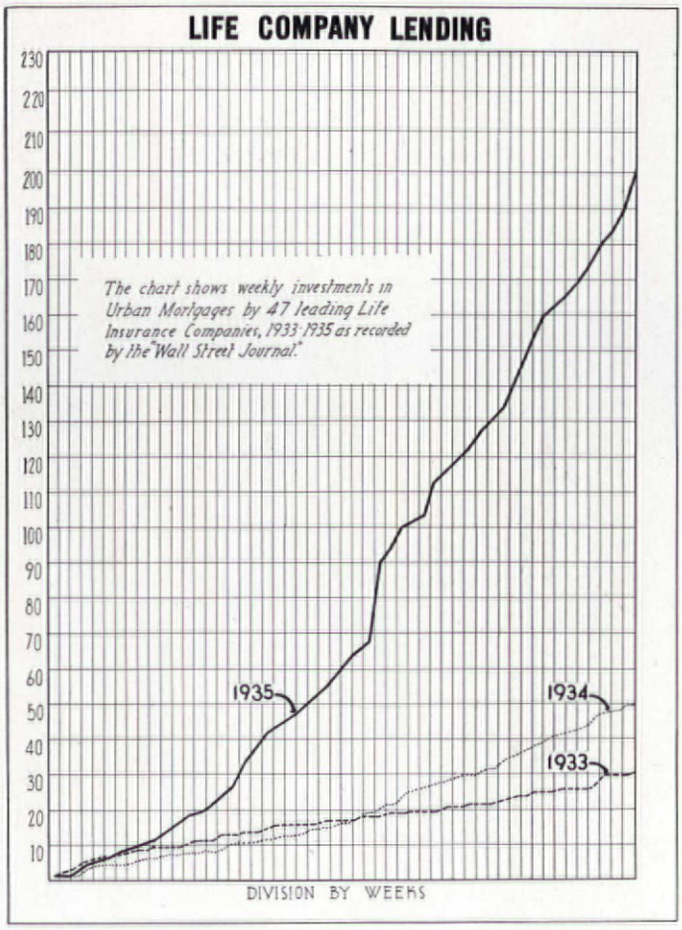


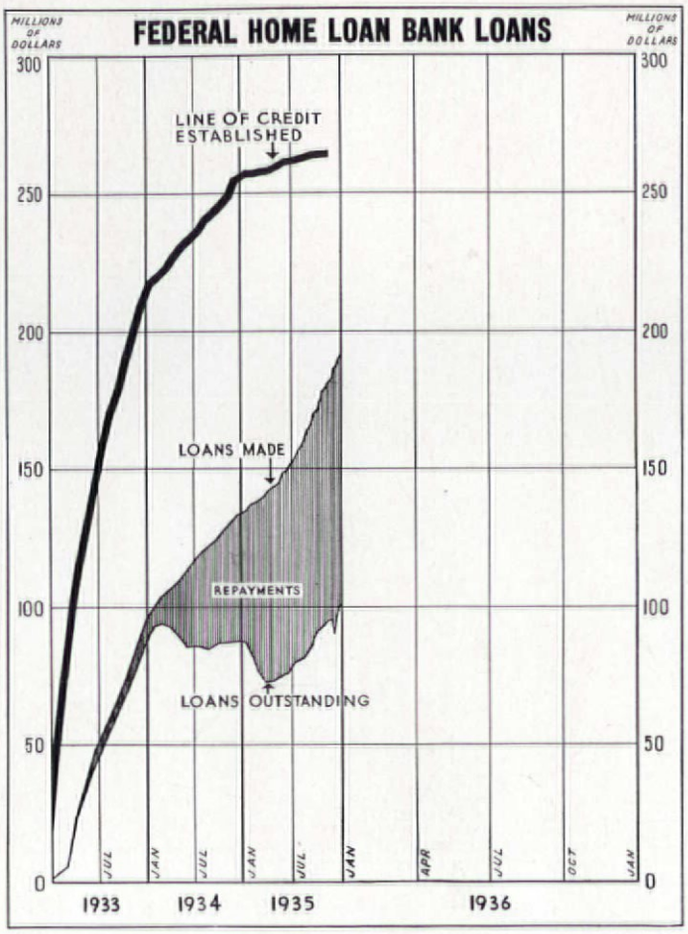

RENTS
% OF 1923
% OF 1923
Data from National Industrial Conference Board
90
80
70
60
1932
1933
1934
1935
1936

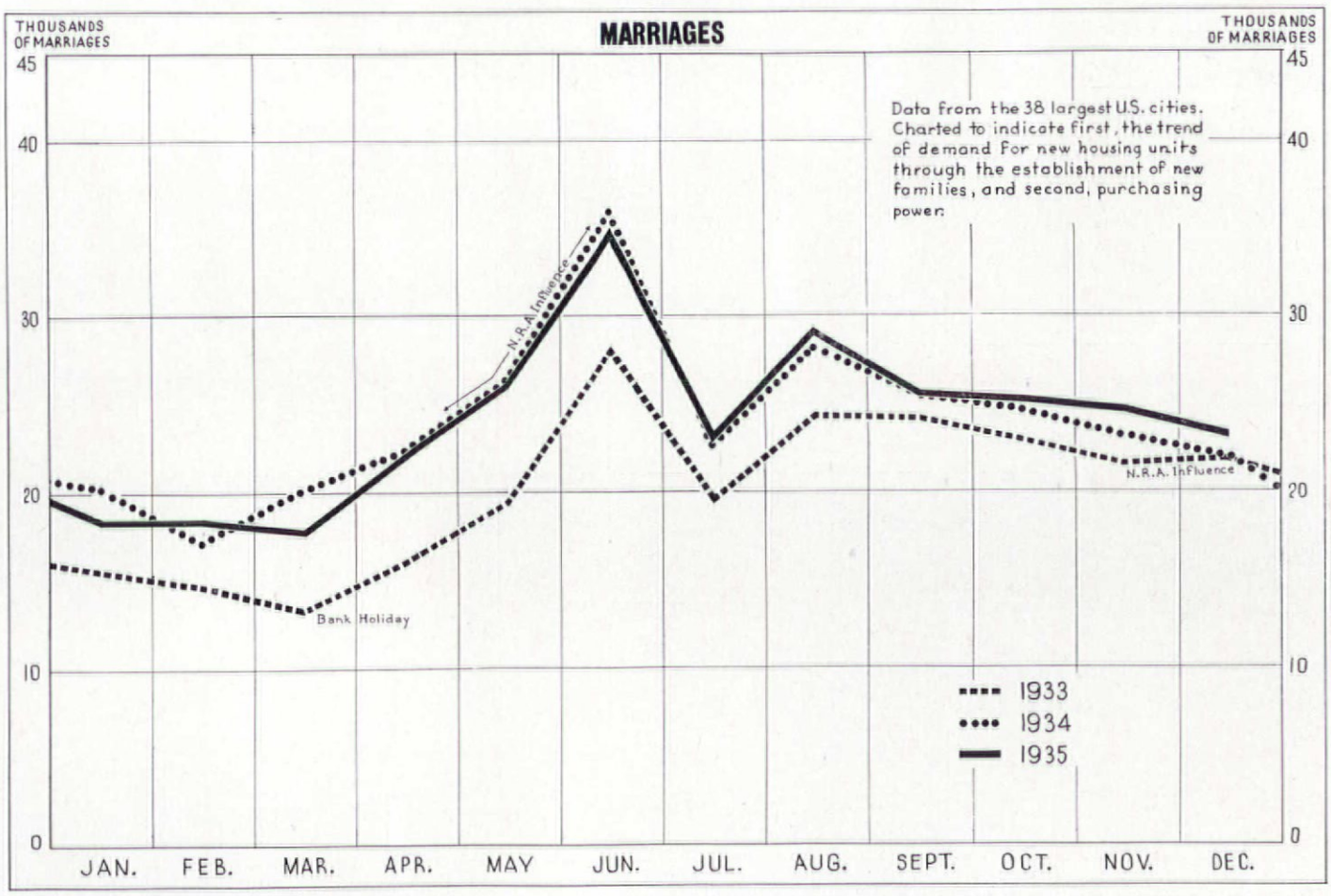

FORECLOSURES
Number
Number
18,000
17,000
16,000
15,000
14,000
13,000
12,000
This chart shows the number of foreclosures on all types of properties in practically identical communities in 48 States with approximately 50% of the population of the United States, as compiled by the Federal Home Loan Bank Board.
1933
1934
1935
1936


STOCKS
% OF 1926 PRICE
% OF 1926 PRICE
130
120
110
100
90
80
70
60
50
40
30
20
10
0
AVERAGE FOR 12 BUILDING STOCKS
AVERAGE FOR 421 GENERAL STOCKS
DATA FROM NATIONAL INDUSTRIAL CONFERENCE BOARD
1932
1933
1934
1935
1936


DISTRIBUTION OF LIFE INSURANCE COMPANY INVESTMENTS
BILLIONS OF DOLLARS
BILLIONS OF DOLLARS
Data from 49 Companies with 92% of the admitted assets of all Legal Reserve Companies supplied by the Association of Life Insurance Presidents
The percentage figures given along the curve for urban mortgages represent comparisons of amounts invested in this classification with total investment
URBAN MORTGAGES
RAILROAD BONDS
FARM MORTGAGES
POLICY LOANS
PUBLIC UTILITIES
U.S. GOVERNMENT BONDS
REAL ESTATE OWNED
23.4%
26.5%
28.1%
29.2%
30.0%
29.6%
28.5%
26.8%
24.6%
21.4%
18.3%
20.9%
6
5
4
3
2
1
0
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935

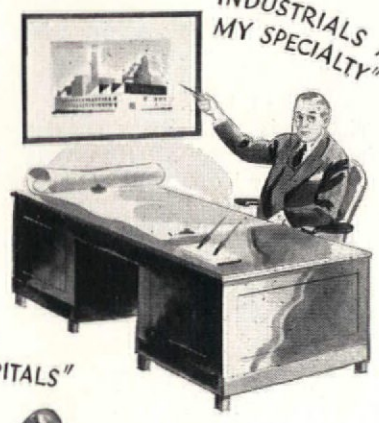

LIFE COMPANY LENDING
The chart shows weekly investments in Urban Mortgages by 47 leading Life Insurance Companies, 1933-1935 as recorded by the "Wall Street Journal."
1935
1934
1933
DIVISION BY WEEKS


FEDERAL HOME LOAN BANK LOANS
MILLIONS OF DOLLARS
LINE OF CREDIT ESTABLISHED
LOANS MADE
REPAYMENTS
LOANS OUTSTANDING
1933
1934
1935
1936


MARRIAGES
THOUSANDS OF MARRIAGES
Data from the 38 largest U.S. cities. Charted to indicate first, the trend of demand for new housing units through the establishment of new families, and second, purchasing power.
N.R.A. Influence
Bank Holiday
1933
1934
1935
JAN. FEB. MAR. APR. MAY JUN. JUL. AUG. SEPT. OCT. NOV. DEC.

To architects who like to specialize:

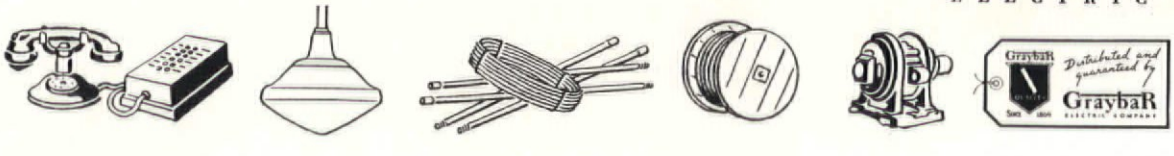
[and to those who don't]



To architects who prefer to specialize in a particular type of work, Graybar offers the support of an electrical supply service geared to meet the special needs of your job . . . At the same time, it is not limited to this. Graybar can supply practically any electrical item for *any* job, large or small. It can deliver electrical materials to the job quickly, conveniently, and economically. It can help you maintain time-schedules. Furthermore, Graybar backs every item with a reputation for quality that goes back 67 years. Your electrical contractor will tell you that materials furnished by Graybar meet the most rigid requirements.

OFFICES IN 77 PRINCIPAL CITIES. EXECUTIVE OFFICES: GRAYBAR BUILDING, NEW YORK, N. Y.

GraybaR
ELECTRIC COMPANY



TAXES DOWN, HOMES UP

puts a New Jersey collection plan ahead of Westchester's.

RARELY does a public investigating body go to the root of the taxation problem in three cities and eighteen towns so thoroughly as last month did Westchester County's Institute of Public Administration. Westchester is that swank county north of New York's Bronx where many a Manhattan commuter lives. Also it is perhaps the most be-subdivided area of its size in the U.S. In consequence, it has a larger bonded debt than any U. S. State, excepting its own New York.

Westchester's IOPA is a group of public-spirited citizens, conspicuous among whom are bankers like New York's Henry Bruere, with a sizable stake in Westchester real estate and municipal bonds. Last month in a bulky report on the county's ominous tax situation, the Institute laid down some suggestions which applied with equal force to over-subdivided communities elsewhere.

Out of 222,802 parcels of property in the county, 132,124 are recorded as unused. Check showed that 51 per cent of all tax arrears was on these lands. To owners who are still struggling to pay their taxes the report recommended immediate assessment reductions, permitting profitable operation. Foreclosure of tax liens was advised in all other cases. Other recommendations: unified control over the debt-incurring powers of the 170 governmental units within the county, centralized control over assessments, restrictions on land uses to be formulated by a central planning agency.

Same week while New York papers were dutifully presenting the Institute's series of releases on its findings, suburban Hackensack, in New Jersey's similarly troubled county of Bergen, impishly came forth with what it thought a better plan. Briefly, it proposed to offer reductions in outstanding assessments to subdividers who could promise actual home building operations within four months' time.

An alert broker named Fred Fountain of the Hackensack realty firm of Fountain & Sons, Inc. was responsible for the idea, which last month promised him brisk business. Coordinator of each deal is a lawyer satisfactory to city and subdivider alike. The purchase price is shelved with him until the deal has been approved and a tax resolution passed by the city council. Upon which the lawyer turns over all or part of the purchase price to the city in taxes, gets receipted tax bills for delivery to the subdivider.

Essence of the plan, and the feature which might make it attractive to other cities was this: The city collects with every sale an amount equal to or above that which it would probably receive if forced to foreclose on the land and sell it to realize taxes. In addition, the improvements added in the building of the new houses provide the city with a new source of taxation from which, in time, enough will be realized to cover the reductions.

First to take advantage of Broker Fountain's idea was Broker Fountain. For a client, one Dr. Howard Meyer, owner of a subdivision called Garden Suburbs, he arranged the first deal with the Hackensack city council.

So pleased was the council with the deal that it now has become an active force for home promotion in the city. As a result, five other deals similar to the first have been consummated elsewhere in Hackensack, much to the pleasure of its building industry. As Realtor Fountain expressed it in a broadside to a favorable Hackensack press, "A troublesome situation is being turned into a profitable one and business will be stimulated by work being furnished. Everyone will share in the benefits directly or indirectly derived from this common sense workable plan."

MORE HOUSE FOR THE DOLLAR

brings Gross-Morton fast sales as they round the 3,000 mark with a $4,800, FHA-insured English cottage.

THE vast amount of talk, literature and figuring that has lately attended the search for cheap housing has produced no more curious and widely accepted dictum than that which insists that the U. S. today is incapable of building a good* house to sell for less than $5,000. No less an authority than Professor Rexford Tugwell has recently subscribed to such a view (ARCH. FORUM, Dec. 1935, p. 4). That the contention is invalid can be demonstrated by referring to the product which Chicago's General Houses have recently designed for sale through Sears, Roebuck: a five-room house for $2,400, f.o.b. Chicago. And further to confound the idea in a more conventional manner are the activities of three young men who are currently flooding Long Island with battalions of houses, all of which sell for less than $5,000, with land.

George and Alfred Gross, and Lawrence Morton, better and collectively known as Gross-Morton, have been in the business of building homes for fifteen years. When George Gross was twenty-one years old he gathered his brother and brother-in-law about him, picked up $3,000 worth of capital and proceeded to build and sell 55 houses in twelve months in Jamaica, L. I. The year was 1922 and the price was $8,000 a house, and since then the price of Gross-Morton houses has dropped steadily.

Not for philanthropy but for business Gross-Morton have always sloganed: "More House for the Dollar." To buyers who have been acclimated, but never contented, to get less for their dollar in housing than in any other form of investment, the idea has proved eminently satisfactory. The first Gross-Morton bargain, back in those Jamaica days, was to offer a down payment of $1,000 on their $8,000 house, when all the rest of the builders were asking and getting $1,800.

In 1923 they sold 350 houses in Forest Hills in the same price range. In 1926 they sold 560 houses in Rosedale for $6,400 each, against a prevailing value schedule of $7,000. In 1928 they embarked on their now famous venture at Laurelton, a golf course which they turned into a community. That year they sold 929 houses, or one-tenth of the total houses sold in the State of New York. In 1929 they sold 350 more Laurelton houses. In 1930 they began selling row houses to meet falling prices. In 1932 the Gross-Morton activities reached a low point; they managed to sell but 34 brick veneer houses in bonanza Laurelton.

* One which will stand up until it is paid for.

Something, it was clear, had to be done, and Gross-Morton, never at a loss, found what it was.

In August, 1934, through the West Side Savings and Loan of Manhattan they negotiated what they firmly believe to be the first FHA mortgage for new construction ever to be granted. On the strength of this, they sold 110 more houses in Laurelton. Then they closed that property's spectacular books. But their eyes had seen the profit that lies in FHA.

When Gross-Morton looked Long Island over early in 1935 for another likely spot on which to build they picked the famous old Belleclaire Golf Club course. That summer they took title to 116 of its acres and announced a grandiose plan for 1,000 homes in a $5,000,000 development. With house plans drawn up they went to Washington and secured an insurance commitment from FHA for $1,250,000 covering 300 houses. On the strength of this they received the capital advance from two banks and two building and loan associations, and did it all in one afternoon. Ground was broken on August 20 and on October 6 Gross-Morton was ready to sell.

What they had to offer was a six-room two-story house and a 40 x 100 ft. plot in a fully developed division for a total price of $4,800. The breakdown and carrying charges:

Cash on Contract	$ 500
Cash on Title	460
Federal Housing Administration twenty-year U. S. Government Insured Mortgage	3,840
	$4,800

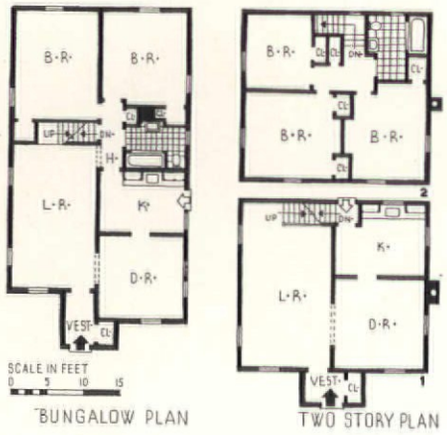
Mortgage Payment (includes interest and amortization, paying off entire mortgage in twenty years)	$27.53
Taxes (approximate)	7.75
Insurance	.40
Water	1.25
Total monthly payment	$36.93

Alternate choice was a five-room bungalow with a free attic, for the same price. To prospects that arrived on the Belleclaire development on that October day, Gross-Morton was able to show concrete streets, cement sidewalks, and fully installed sewers, all paid for, besides lawns fully shrubbed and planted with the tender sod of old Belleclaire greens. Thus it was apparent that the average family could pay all living expenses in the new houses for less than $50 a month and still own free and clear in 20 years.

All of this could be perfectly true and the Gross-Morton houses could still justify the current animadversions against the less-than-$5,000 house unless they were in fact good. And to prove this Gross-Morton loves to dwell on the point that each of their houses has been subjected to triweekly inspections by the knowing field

(Continued on page 39)

Belleclaire — The Third House Is a Bungalow *Duprez*



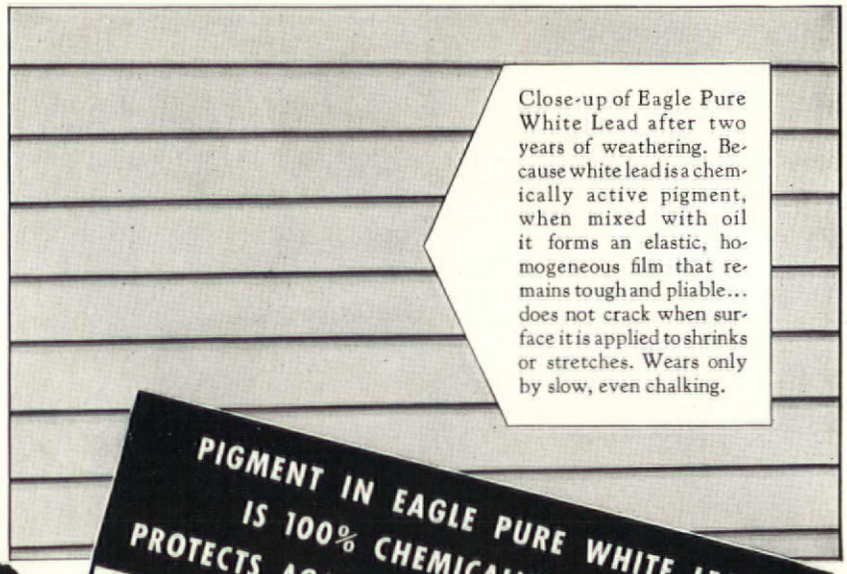
The All-Purpose Layouts

Camera shows why

EAGLE pure WHITE LEAD

gives better paint protection

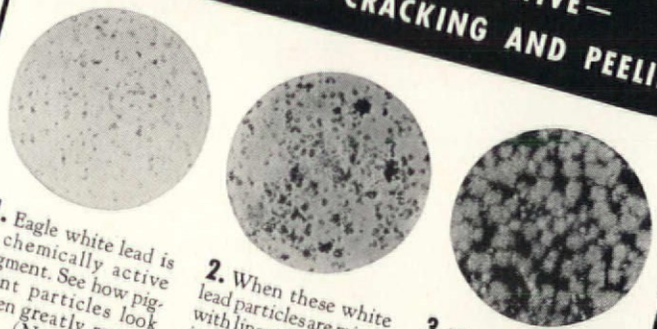
Substitute pigments in this paint created a brittle film . . . cause of most premature cracking and peeling.



Close-up of Eagle Pure White Lead after two years of weathering. Because white lead is a chemically active pigment, when mixed with oil it forms an elastic, homogeneous film that remains tough and pliable... does not crack when surface it is applied to shrinks or stretches. Wears only by slow, even chalking.

Choice of good painters since 1843.
Sold by paint dealers everywhere.

PIGMENT IN EAGLE PURE WHITE LEAD IS 100% CHEMICALLY ACTIVE— PROTECTS AGAINST CRACKING AND PEELING



1. Eagle white lead is a chemically active pigment. See how pigment particles look when greatly magnified. (Note uneven, irregular shape of particles—one reason for white lead film wearing so long.)

2. When these white lead particles are mixed with linseed oil, a chemical reaction begins. Particles "bloom out," making an interlocking mass of pigment and linseed oil. (Inert paint pigments do not bloom out.)

3. The "blooming out" process completed. This homogeneous film of white lead particles and oil seeps into the surface it is applied to... sticks on like glue. Stays tough and pliable... does not crack when surface stretches or shrinks.

THE EAGLE-PICHER LEAD COMPANY · CINCINNATI

agents of the Federal Housing Administration. And for those who might not be impressed by the standards thus insured they have hung little signs all over their demonstration house pointing to the virtues of their materials. Thus the curious prospect can, if he wishes, learn among other things that the house is, of course, fully detached; of new brick and stone construction; has genuine slate roofs; reenforced roof beams; copper leaders and downspouts and brass plumbing throughout; rests on a 12 in. poured concrete

Duprez

Subdivider George Gross

foundation on which, in turn, rests 7/8 in. double oak flooring. The plaster, they proudly remark, is three coats deep. The impressive roster of supply firms includes Thatcher (boilers), Delco (oil-burners), Kohler (radiators and plumbing fixtures), Tracy (sinks), McKinney (hardware), Universal Atlas (cement), Adamston (glass), Duco (baked enamel kitchen cabinets). The Gross-Morton house, in short, is built with some solidity.

Examine the exterior of this house in the picture on page 37. It is the product of Architect Arthur E. Allen, who has designed sixteen other exteriors to fit the single two-story interior plan and the single bungalow interior plan. Architect Allen has designed some 15,000 houses, a great many in the last seven years for Messrs. Gross, Gross, and Morton. He it was who was responsible for the Spanish and Old English confections which helped make Laurelton one of the fastest selling developments in the U. S. Architect Allen is well aware of the shortcomings of the houses he designs, but in common with his employers he likes to point out this fact: they sell, and they sell fast. It is the public who dictates its essential features.

Gross-Morton appear to be able to turn out this good solid house and lot with the greatest of ease for less than $5,000. The trick is this: Gross-Morton have built and sold better than three thousand houses in the last fifteen years. And being intelligent they have learned their business. They shun the general contractor, prefer to sublet individual contracts for foundations, plumbing, carpentry, electrical works, etc. In the course of years they have picked up a hardy band of foremen to whom they let the work in a development on a piece basis, so much per house. This has the effect of speeding up the work. They give to these foremen an exact sum of money for materials, require them to meet all demands with it. This has effected great economies in a field where wastage has frequently been known to run on certain items as high as 50 per cent. To help the foreman get a good bargain Gross-Morton will often put in a strong word with the manufacturer. But Gross-Morton does not deal directly with manufacturers.

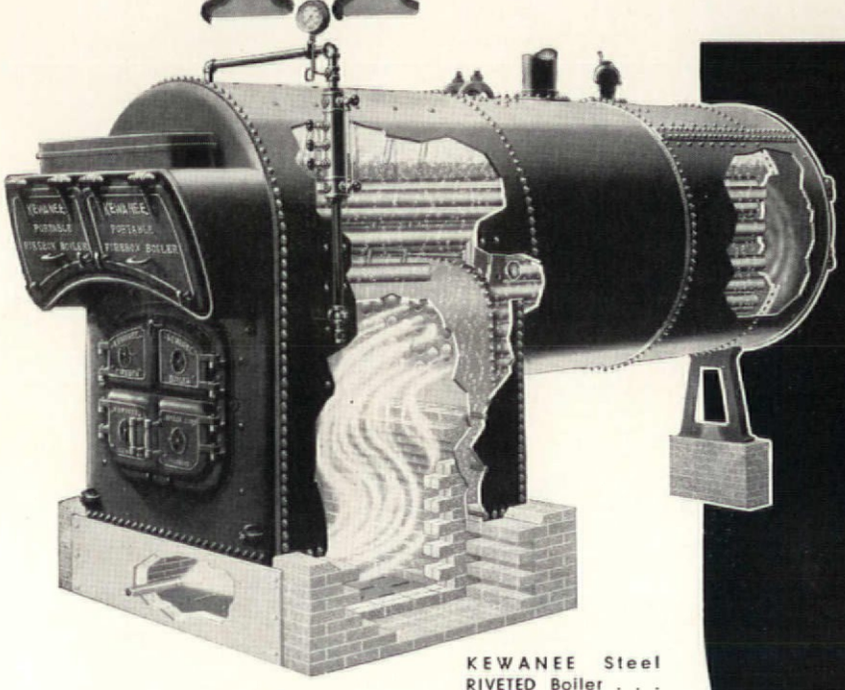
In 90 days, Gross-Morton sold 112 of its Belleclaire houses. Long Island believes, obviously, that it is getting more house for the dollar. And so, still, does Laurelton, where suburbanites live in $7,500 haciendas which they bought from Gross-Morton in 1929, and which are still good strong houses. Just how much house they give for the money Gross-Morton, in the present bitter market, refuses to divulge. A conservative estimate would value the house alone at about $3,500. But these are the economical Gross-Morton dollars, which in less expert hands might well build less impressive houses. Meanwhile, Messrs. Gross, Gross, and Morton continue to talk of 1,000 houses in Belleclaire—and even their rivals begin to believe.

For HEATING Buildings of Every Size

BY MECHANICAL OR HAND FIRING

. . . with Coal, Oil, or Gas

KEWANEE



KEWANEE Steel RIVETED Boiler . . . for heating larger buildings.

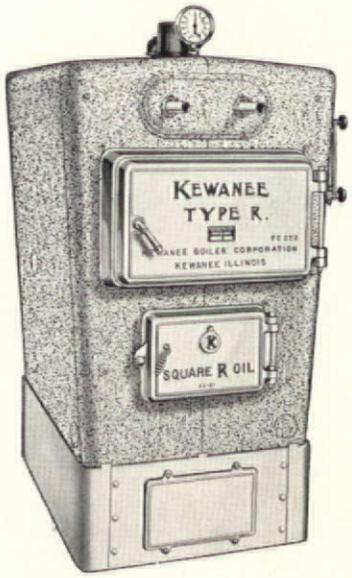
Steel BOILERS

WHETHER a building be large or small . . whether it is to be heated with coal, (hand o stoker fired) oil or gas . . . there is a Kewane Steel Boiler just right for the job.

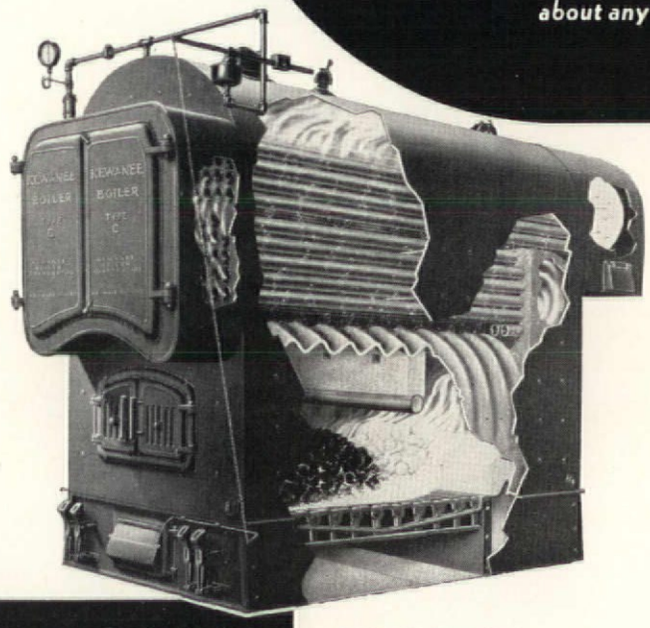
. . . and back of each Kewanee is sixty-si years experience in building of heating unit . . . an experience which has resulted in man features which insure longer life and *lowe fuel bills.*

THE EFFICIENCY OF ANY HEATING PLANT DEPE PRIMARILY ON THE BOILER. Actually the boile the "heart" of every heating system. And the sys can't be efficient unless the boiler is RIGHT.

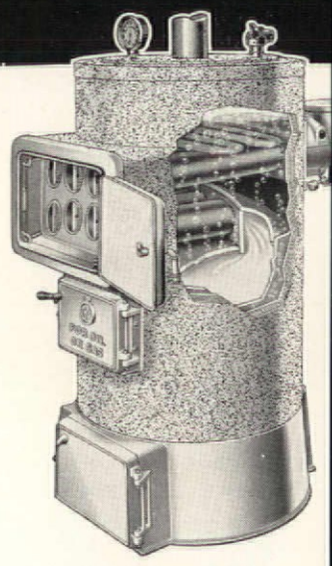
Ask for complete information about any or all Kewanee Boilers.



KEWANEE Square "R" . . . neatly jacketed units for heating homes and smaller buildings.



KEWANEE Type "C" . . . a compact boiler of unrestricted efficiency



KEWANEE Round "R" . . . fo homes, in Round jacket o shown, or in Square or Rego Jackets to completely enclos the burner with the boiler.

KEWANEE BOILER CORPORATION

KEWANEE, ILLINOIS

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(Branches in Sixty-one Principal Cities)

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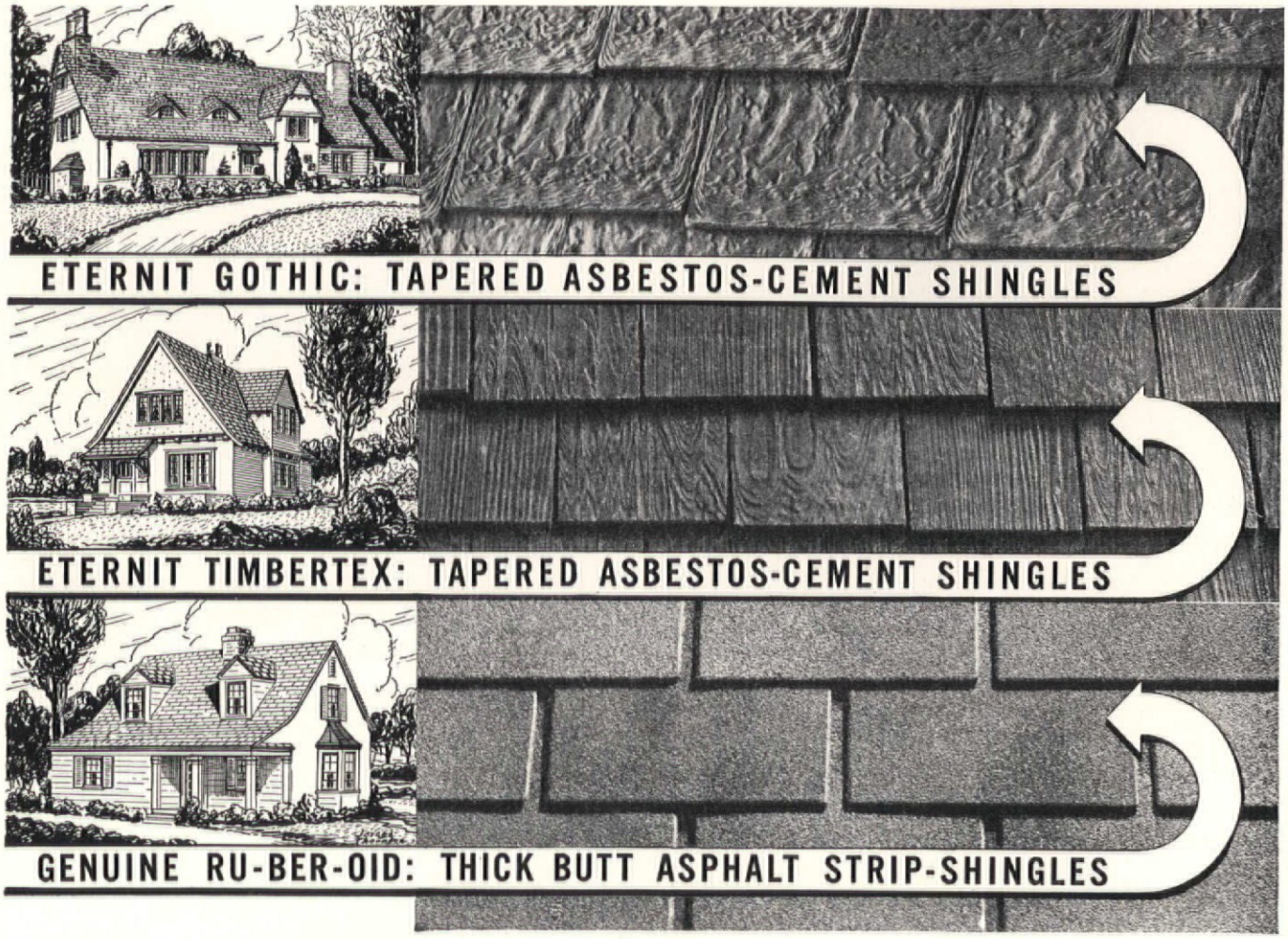

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Name_____

Address_____

BIG NEWS FOR THE ARCHITECT AND BUILDER OF MODERATELY PRICED HOMES!

New Adhesive Sealex Linoleum cuts floor costs 20% . . . is laid in 2 to 3 hours . . . has National Distribution

SELL a prospect on the convenience and the beauty of the kitchen, bath and child's room and you've gone a long way towards selling the house.

The new, patented* Adhesive Sealex Linoleum is designed to help you get this valuable *plus* in sales appeal . . . at a substantial saving—as much as 20%—in installed cost. This revolutionary, new inlaid linoleum has a factory-applied adhesive on the back, which makes the use of lining felt unnecessary and results in other marked reductions in laying time.**

Adhesive Sealex Linoleum is cut to fit and the adhesive on the back activated with lukewarm water and a brush. It is then applied directly to the under-floor and pressed down with foot pressure alone. The even distribution of the factory-applied adhesive seals every square inch of linoleum tightly to the under-floor. Result: a stronger, longer-wearing installation.

Because of the wide range of beautiful, up-to-the-minute patterns in which it is made, Adhesive Sealex Linoleum is recommended for floors in *any* part of the house. Its economy and its smooth, sanitary surface are selling points to which your prospect will quickly respond.

There are now thousands of Adhesive Sealex Linoleum dealers, in all parts of the country, who will gladly give you estimates. We have a corps of trained men in principal cities whose job it is to help you in solving your floor-covering problems. Write us for full information.

*Adhesive Sealex Linoleum is an exclusive Congoleum-Nairn product, protected by U. S. Patent No. 1,970,503.

**Laying estimate of 2 to 3 hours is based on average installation of about 15 sq. yds.

ADHESIVE SEALEX LINOLEUM

TRADEMARK REGISTERED

THE MODERN INLAID LINOLEUM . . . MADE BY CONGOLEUM-NAIRN INC., KEARNY, NEW JERSEY

FORUM OF EVENTS

(Continued from page 13)

portion of the foundations, where are placed both heating and cooling systems. Air intake for the air conditioning is located at the upper part of the rear wall, and the outlets for conditioned air are on either side of the front or box-office wall of the theater. Sound system is RCA.

Merchandising tricks of the Pix Theater include a parking area three times the size of the building, apparatuses for the hard-of-hearing, a price schedule from 10 cents for children in the afternoon to 40 cents for adults in the evening, continuous showings.

While the price for this original Pix Theater may have run higher due to experimentation, its reproduction price is placed at $35,000.

PROJECT

A survey of historic American buildings in 31 States and the District of Columbia under the auspices of the Works Progress Administration was announced last month following the approval of Comptroller General McCarl. The survey will employ some 1,400 unemployed architects and technicians, will disburse $534,000. According to current plans the survey will last six months, and average 800 on the work at one time, which is to say that each man will get a bit more than three months' work.

The survey calls for exactly measured drawings of important examples of American architecture in five regional subdivisions of the country, and will be under the direct supervision of the National Park Service.

RUBBER BAR

The day when a new bar can make news is now almost past, but last month in Akron, Ohio, the Portage Hotel opened one which can claim to be among the most justifiably original yet designed. In a town brought up on such names as Seiberling, Firestone, Goodyear, and Goodrich, inspiration

AKRON'S RUBBER ROOM

was not hard to find. The bar is called "The Rubber Room."

Designed by Architect Kenneth C. Welch of Grand Rapids it has rubber everywhere. All doors are rubber covered, the floors are rubber tile, all chairs, stools, and settees are covered with rubber materials, wainscoting is rubber, the tables are rubber, and of course the bar is rubber.

Much more interesting than this generous use of one material are the seven murals, depicting scenes from the

(Continued on page 44)

FORUM OF EVENTS

(Continued from page 43)

rubber industry. Designed by Ivor Johns of Cleveland, they are made of rubber mosaic in eleven colors. Each color area is a separate segment of rubber, fitted with the aid of code numbers to fiber boards with rubber cement. Odd fact: for the murals alone, one ton of rubber was used. The resiliency of the rubber segments causes the colors to blend satisfactorily. The murals can be washed without harm.

Authentic note in the decoration was the insertion of small designs in the rubber tile flooring, each one representing — by a hot water bottle, a rubber, a tire, etc.—a major product of the industry. Robust note was the use of full-sized tires, slung on a horizontal plane from the ceiling, as lighting fixtures.

HOUSES

LAST month in three different towns as many vastly different types of buildings made interesting news:

¶ In West Lafayette, Indiana, the Purdue University Research Foundation arranged for the construction of a frameless bungalow made of steel. When erected the house will become one of the experimental units used by the Foundation in their study of the possibilities of the less-than-$5,000 home.

Built by the Insulated Steel Construction Company of Middletown, Ohio, the bungalow has six rooms and a one-car garage, and meets the dual Foundation requirements of adequate living quarters for a family of four and a delivered price of less than $5,000. The house contains three bedrooms, a dining room, living room, kitchen and lavatory.

¶ In Pittsburgh students of the Carnegie Institute of Technology gathered one day in front of a wall of insulated block faced by a heavy wire mesh. They watched carefully, timed while a spray gun coated the wire mesh with cement to a thickness of about two inches, while a taut wire scraped the uneven surface flat. The time-watching students clocked, figured that the cement walls needed to build an eight-room house can presumably be "shot" in this manner in less than eight hours. This was the fastest computation ever given for cement-gun construction. Reason: the Carnegie gun shoots its cement at the rate of six cubic inches an hour, fastest yet.

¶ Glory of 1906 was the $1,500,000 Manhattan Opera House, built by that lavish soul, Oscar Hammerstein, to shame the Metropolitan into darkness. As all the world knows, it failed to do this and finished a tatterdemalion career by being auctioned off for the estate of the Widow Hammerstein in 1922. Last month a man with the true Hammerstein touch was ready to bring the old Opera House back to glory. His name was Max Reinhardt and he was ready to produce a spectacle more imposing than ever in a dramatization of the Old Testament called "The Eternal Road."

His reason for choosing the old Opera House was simple: it had the largest stage available in the U. S. Item: scenery will be shifted by cranes. After extensive alterations—including the demolition of the famed gilt proscenium boxes—the Manhattan was able to lay claim to a title which would have pleased its dead promoter all over again. It now has the largest indoor stage in the world, not excepting the Hippodrome.

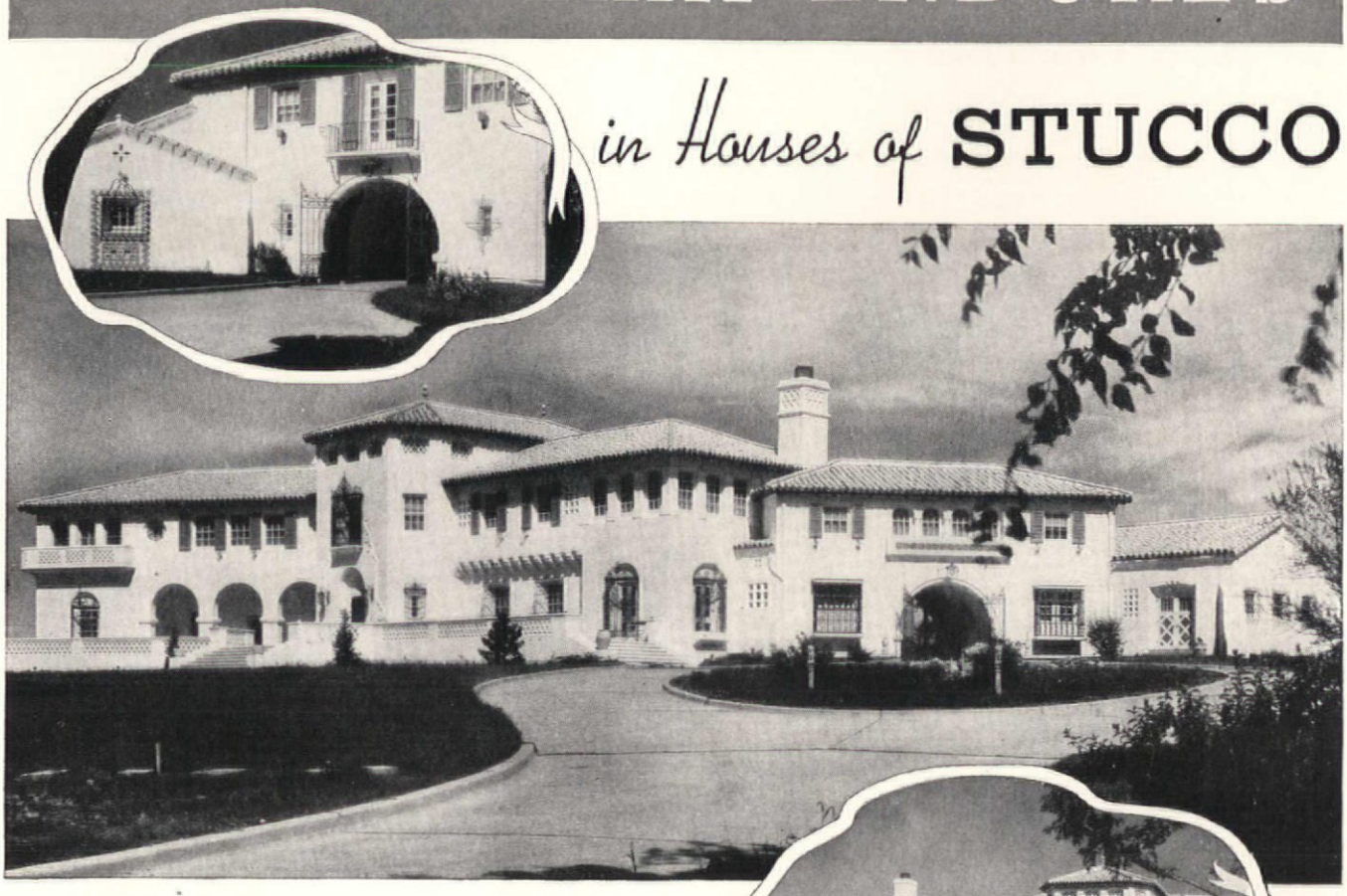
RESTORATION

THE announcement last month that the Municipal Art Commission of New York planned to restore the City Hall served to remind the country of one of its authentic beauties. The cornerstone of the building was laid April 18, 1803 "at precisely six o'clock," reported the contemporary *Chronicle,* and the event was signalized by a national salute from the field pieces of an honor-guard, followed by a feu-de-joie of three

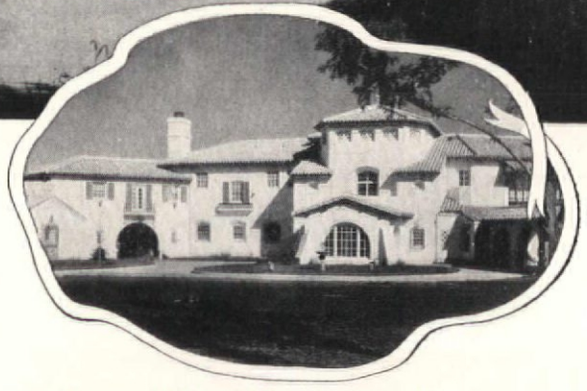
(Continued on page 47)

BEAUTY THAT ENDURES

in Houses of STUCCO



Beautiful example of a stucco finish made with Atlas White. Architects: Atlee B. and Robert M. Ayres of San Antonio. Owner: John A. Brown of Oklahoma City.



☆ Architects Ayres are pardonably proud of this fine home. And so are we, for this is another beautiful stucco job made with Atlas White portland cement.

With good stucco—white portland cement stucco—you can get just the right color to fit the architectural design and to tie in with the texture used.

Stucco made with Atlas White (a factory-prepared stucco is preferable) is economical to apply on old buildings as well as new. Permanent. Firesafe. Weather-proof. Requires little or no upkeep. And the charm of stucco actually enhances with age.

For the full story write Universal Atlas Cement Co. (United States Steel Corporation Subsidiary), 208 South La Salle Street, Chicago.

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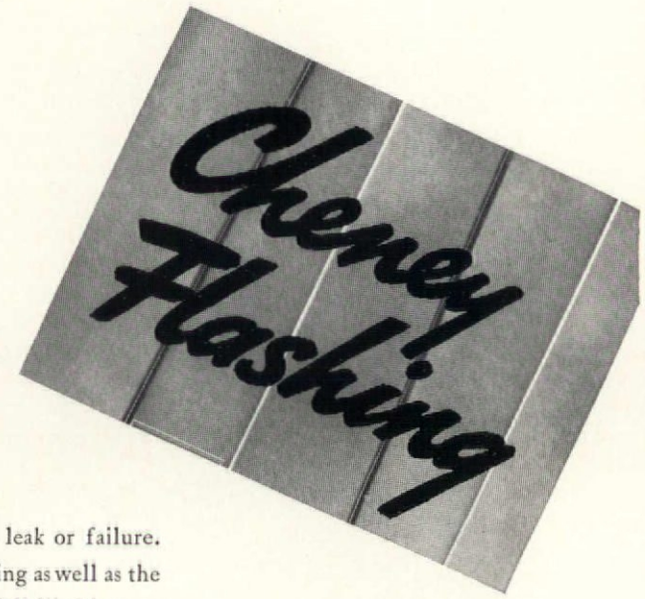

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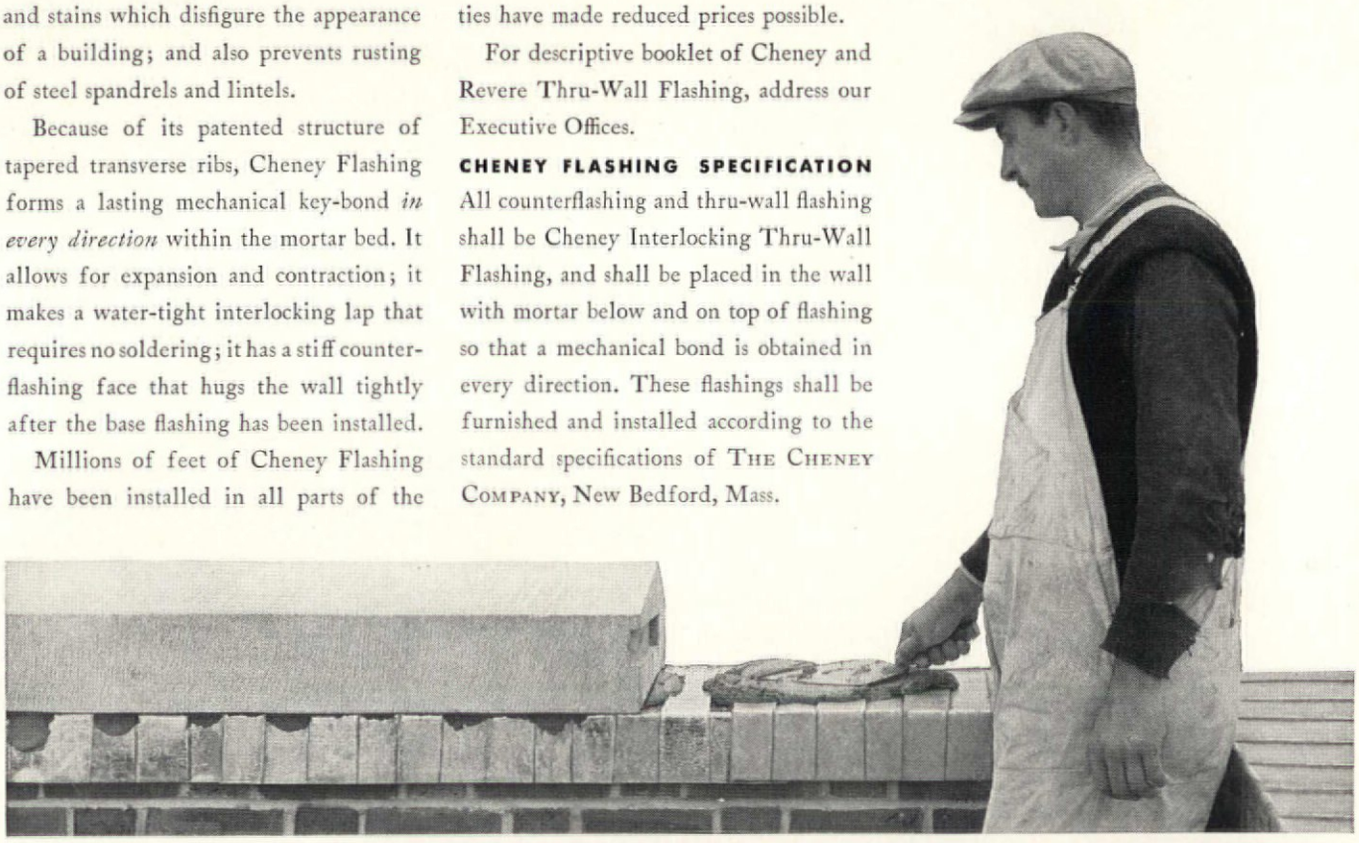

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FORUM OF EVENTS

(Continued from page 44)

rounds of crack musketry and a collation for the workmen.

The plans emerged from a $350 prize competition and were the work of Joseph E. Mangin and John McComb. The front of the building was West Stockbridge marble, to haul which four-horse teams to the imposing number of 333 were employed. Construction once languished for lack of a $20,000 appropriation from the city. The formal opening did not occur until nine years later, in 1812, and once again dignitaries gathered under the sycamore and poplars in a celebration for which the City paid "the lawful sum of $50." Total cost of City Hall: $500,000.

The building today looks much the same as it did then. In 1858 fireworks attendant upon the celebration of the laying of

Wide World

CITY HALL — CIVIC VIRTUE IS NOW DEPARTED

the Atlantic cable ignited the cupola, and again in 1917 the restored cupola was once more destroyed. Nothing seems to have been lost in the last restoration. Beneath that cupola rises one of the most striking staircases in the country, "balanced" and bifurcated.

Fashionable tag for the architectural style of the building is Italian Renaissance, but the treatment of the windows shows both French and English tradition, and last month the somewhat indefinite description of "genuine Early American" was freely bandied about.

The Municipal Art Commission, which as a private body can only suggest plans to the City, wants to restore the terrain surrounding the City Hall to its original bucolic setting by replanting the long-withered park which used to flourish when the Bowery was uptown.

HUEY P. LONG BRIDGE

"Boooo!" shouted the crowd.

Mayor T. Semmes Walmsley of New Orleans, bitter, obstinate foe of the late Senator Huey P. Long raised his hands for silence. The "boo's" were prolonged, lasting fifteen minutes. None but those closest to him heard what the mayor said. When Governor O. K. Allen, the assassinated Senator's good friend, rose to speak, the crowd cheered. "This bridge," said Governor Allen, "stands as a monument to that great builder, the late Huey P. Long!"

The bridge to which he referred and which was later officially opened with ribbon-snipping by Senator Long's daughter, Rose, and Foe Walmsley's daughter, Augusta, was the 29th bridge across the Mississippi and the first link between the river's east and west coast south of Vicksburg.

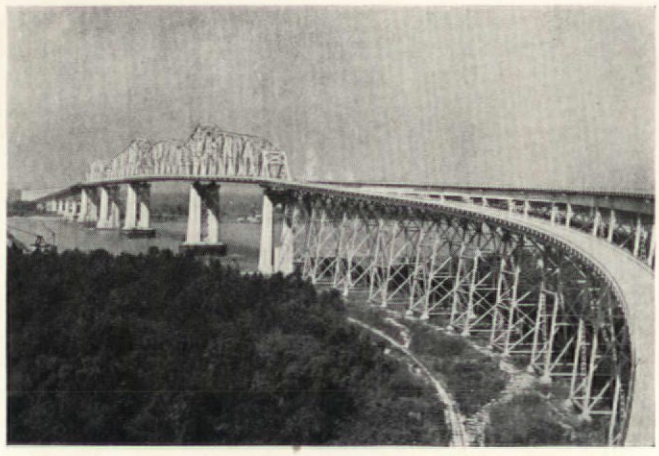
(Continued on page 48)

FORUM OF EVENTS

(Continued from page 47)

Built at a cost of $13,500,000 the bridge is a railroad (Southern Pacific) vehicular and pedestrian crossing, toll free because it was financed by the Reconstruction Finance Corporation which purchased bonds backed by New Orleans and Louisiana agencies and the Southern Pacific.

Designer Ralph Modjeski (Modjeski, Masters and Case) met many a difficulty as he built his bridge against the six

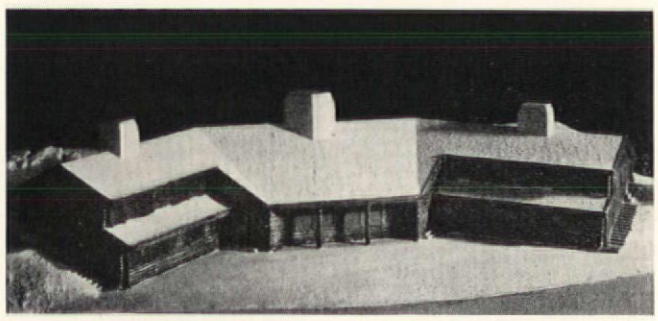


LONG BRIDGE

mile an hour Mississippi current, thereby displacing what was one of the longest train ferries in the world. Because of the low-lying terrain at the site, the rail approaches are approximately 1¾ miles long, bringing the total length of the span to 4.4 miles. Foundations were built on sand 170 ft. below gulf level. From the bottom of the foundation to the superstructure top, the distance is 409 ft. (approximately the height of a 36-story building). At high water ships will have 135 ft. clearance. The bridge, officially known as the Huey P. Long bridge, stands at Nine Mile Point, a spot a mile and a half north of New Orleans.

AMERICANA

"THERE remains however the American landscape and the lives of the people who live in that landscape. These can be looked at and absorbed for the asking." So writes Architect Harold Sterner in another section of this issue (page 7), defining the basis for an American style of architecture. Not content with mere definition Architect Sterner last month



WINTER CAMP BY STERNER

exhibited models and sketches of four houses—presumably of American inspiration—at the Marie Harriman Galleries in Manhattan. Most interesting were those designed for a winter camp and a sub-tropical house. (See cut above and page 51.)

Certainly American in the winter camp is the log construction. The windows are wide and low to catch the angle of the northern sun, and there is a fireplace in every room.

(Continued on page 51)

Now a complete line of MONEL METAL CABINET SINKS *and* KITCHEN CABINETS *by* WHITEHEAD

View of kitchen in the residence of Mr. Charles P. Pelham, Darien, Conn., showing Monel Metal cabinet sink, Smartline table with Monel Metal top.

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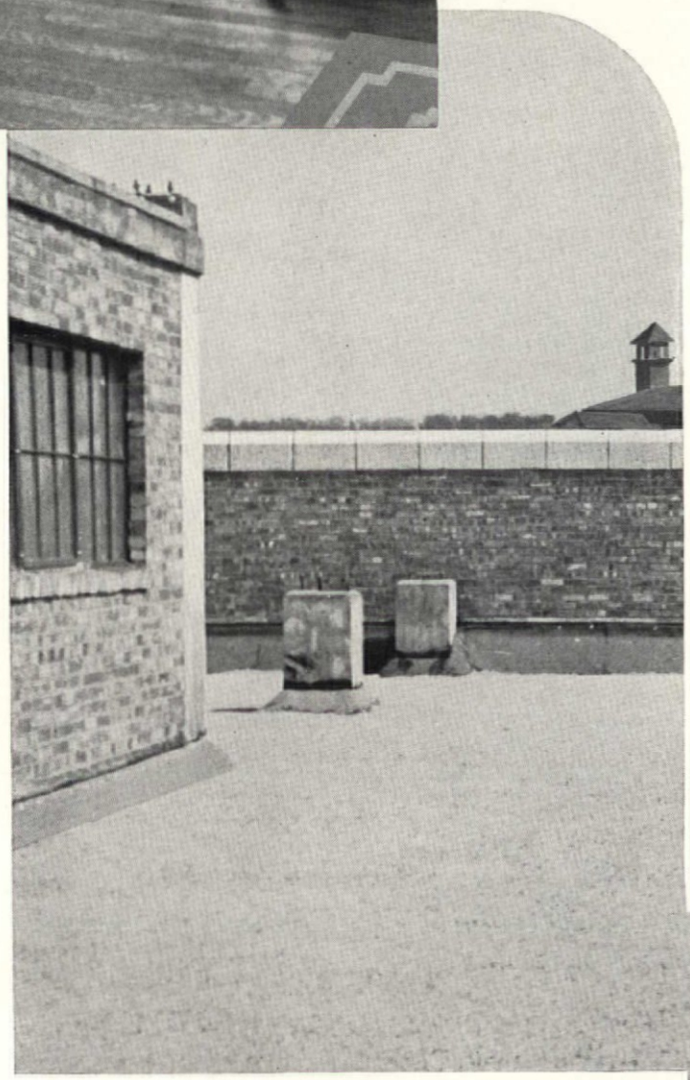

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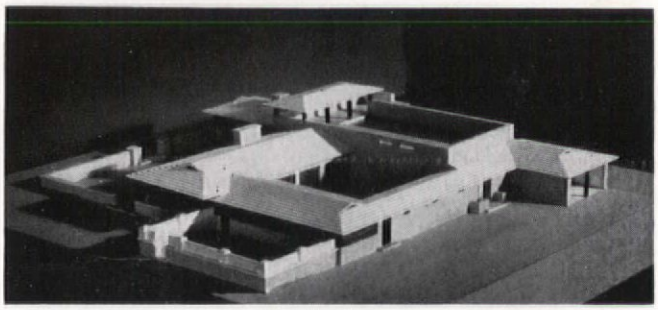
FORUM OF EVENTS

(Continued from page 48)

Curiosa Americana can claim the roof, which is constructed of growing grass on a metal base.

The sub-tropical house is fit, says Architect Sterner, for such a spot as Jekyl Island. Its most interesting feature is the

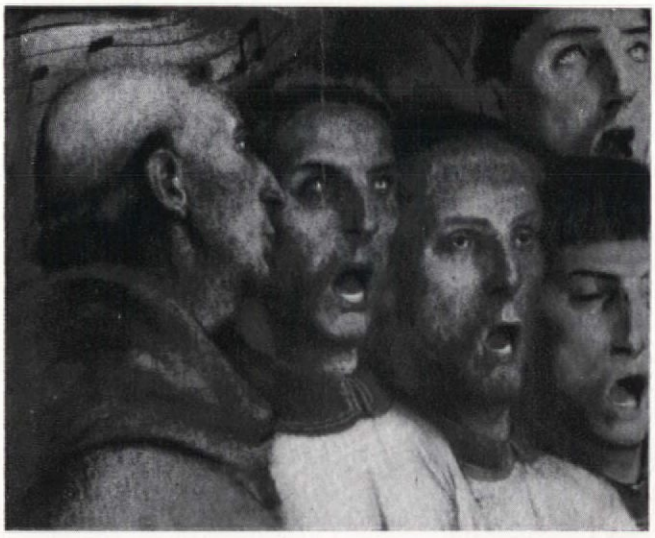


SUB-TROPICAL HOUSE BY STERNER

swimming pool, which is contained in the highest rectangle of the structure. One wall of this pool consists of an aquarium stocked with tropical fish. Beneath the pool runs the long, windowless entrance corridor, which is lighted by the sun's filtration through the pool.

PWArt

EVER since the New Deal decided, probably to its own surprise, that unemployed artists should paint for their bread, the land has been full of painters, muralists, and caricaturists turning out an unaccustomed volume of art. Last month in Manhattan, art's most prolific production center, the



FLOGEL'S *MUSIC*

first exhibition of this relief by-product ever to be held was staged under the auspices of the local Works Progress Administration.

On view were the works of 27 artists, consisting mostly of sketches of projected and completed murals. Only to assiduous gallery-hounds were most of the names familiar: Moses Soyer, Michael Newell, Arshile Gorky, Alfred Crimi, Maxwell Starr, Sakari Suzuki. Most widely publicized name was that of Lucienne Block, who with four women assistants a few months before had completed with some éclat a series of murals for the local House of Detention for Women.

"What is it?" queried chubby Mayor Fiorello LaGuardia on opening day. He pointed to a brightly colored arrange-

(Continued on page 52)

FORUM OF EVENTS

(Continued from page 51)

ment of T-squares, triangles, and rulers. The title was "Abstraction" and it set the pace for much of the work. Notable also was the display of social consciousness, the tendency to caricature. When completed the murals are to grace such places as high schools, public hospitals, libraries, public buildings.

Where it was not too erratic, the calibre of the work was good. Typical in quality was a two panel mural by a Rivera student named Seymour Flogel, to be placed in the music room of the Abraham Lincoln High School, Brooklyn. Titled "Primitive Classic and Modern Music," it suggests ancient music by tympana, modern music by chanting monks on one hand, Stravinsky on the other. (See cut page 51).

COMPETITIONS, PERSONALS

THE School of Architecture and Allied Arts of New York University announces a course in Surveys and Research, dealing with the selection, measurement, collection and interpretation of survey facts and their presentation in maps, charts and plan. The course relates only to city and regional planning. Apply Admissions Office, 1071 Sixth Ave., New York.

In Portland, Ore., the 59-year-old State House which burned to the ground last year will be replaced by a $2,500,000 structure. Plans for the new building will be selected in a national competition conducted by the Capitol Commission. First prize will be the $150,000 commission on the job. The jury of three architects and two laymen will consider only the work of registered architects. In charge is T. H. Banfield, member of the State Capitol Commission of Portland.

The Massachusetts Institute of Technology announces a first-year course for architects which stresses practical professional problems: purchase of the lot, planning of a modestly sized home, selection of contractor, supervision of construction.

F. D. Amory, Jr., architect, has moved his offices to 15 East 40th St., Manhattan. Tel., Lexington-2-4058.

W. K. Oltar-Jevsky, architect, has moved to 3 West 70, Moscow 66, U. S. S. R.

C. H. Gregg, architect, announces the opening of an office at 3701 Sixteenth St., N. W., Washington, D. C.

Clark & Crowe, architects, of Lynchburg, Va., announce the dissolution of their partnership. Pendleton S. Clark has opened business at 610 Krise Building, Lynchburg, Walter Rogers Crowe at 609 Krise Building, Lynchburg.

OBITUARIES

GEORGE MARBLE BARTLETT, A. I. A., 62; one month after his retirement; in Mount Vernon, N. Y. He was a longtime associate of Ernest Flagg and designed many a Westchester municipal building. More recently he was architect for all hangars and depots for the Colonial and Curtiss Flying Company.

HARRY E. WEEKS, A. I. A., 64; after a two year illness; in Cleveland, Ohio. Born in West Springfield, Mass., he studied at the Massachusetts Institute of Technology, then gravitated to Cleveland, where in 1911 he entered into partnership with F. R. Walker, with whom he had already worked for better than ten years. Between them Walker and Weeks designed such buildings as the Federal Reserve Building, Severance Hall, the main building of the Cleveland Public Library, the Cleveland Post Office, the Cleveland Stadium, and the famed Indianapolis War Memorial. Surviving are his wife and two sons.

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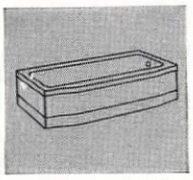
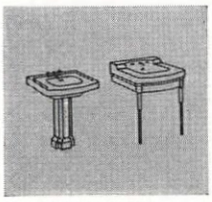


● The public is always interested in news—and new products are news. Now people are being told about a new kind of plumbing fixtures, a kind that has more beauty, more lustre, more strength, yet is lighter in weight.

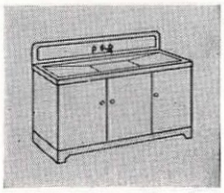
● For years there have been attempts to adapt to plumbing fixtures the many advantages that are possible through the use of pressed or formed metal. Outstanding leaders in three great industries collaborated in the production of heavy sheets to withstand the draws—in the construction of mammoth presses and dies for forming the ware from heavy gauge metal—in adapting the "wet process" of porcelain enameling to secure an unblemished expanse of more beauty and higher lustre than has been possible with cast iron.



● The result is a new kind of plumbing ware, lighter in weight—yet stronger. Bath tubs weigh less than one-third their former weight. Sinks and lavatories weigh proportionately less. Dead-weight loads are substantially reduced in hotel and apartment structures involving multiple installations.

● This new ware carries the familiar Armco Label, identifying the use of Armco Ingot Iron, most famous of all bases for quality porcelain enamel.

If your file is not complete, write us for details on this newest development in the field of plumbing goods.



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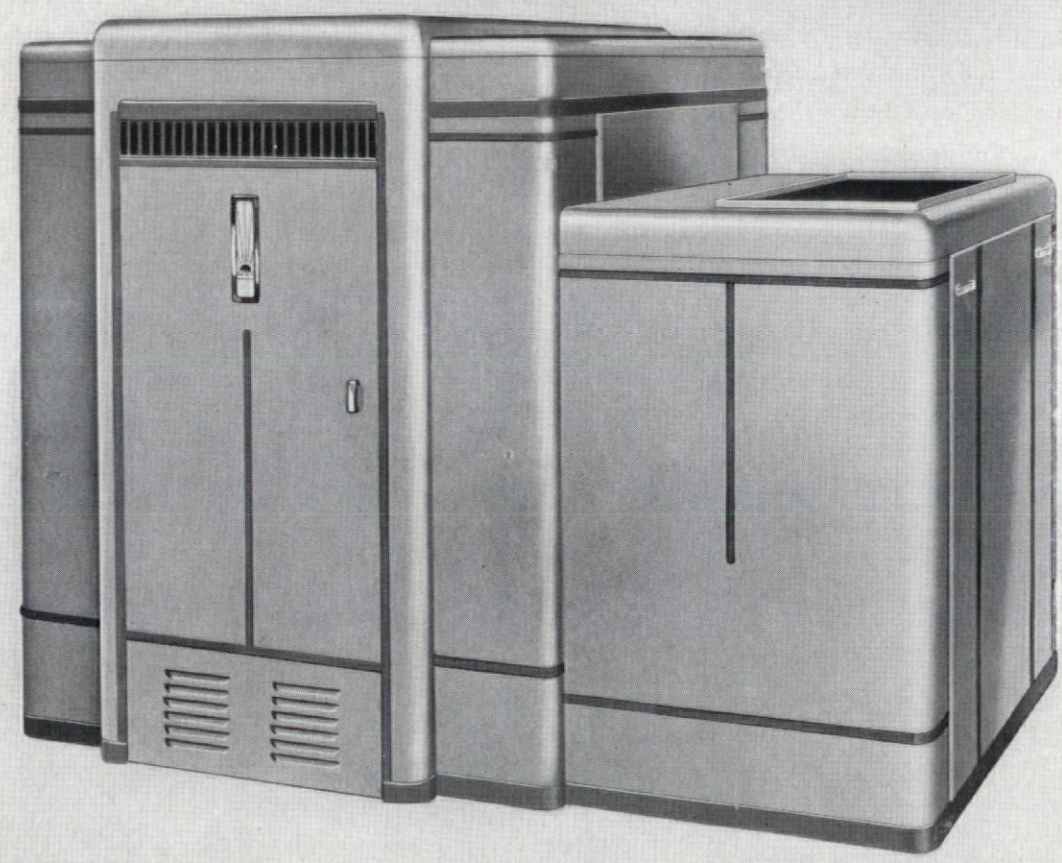

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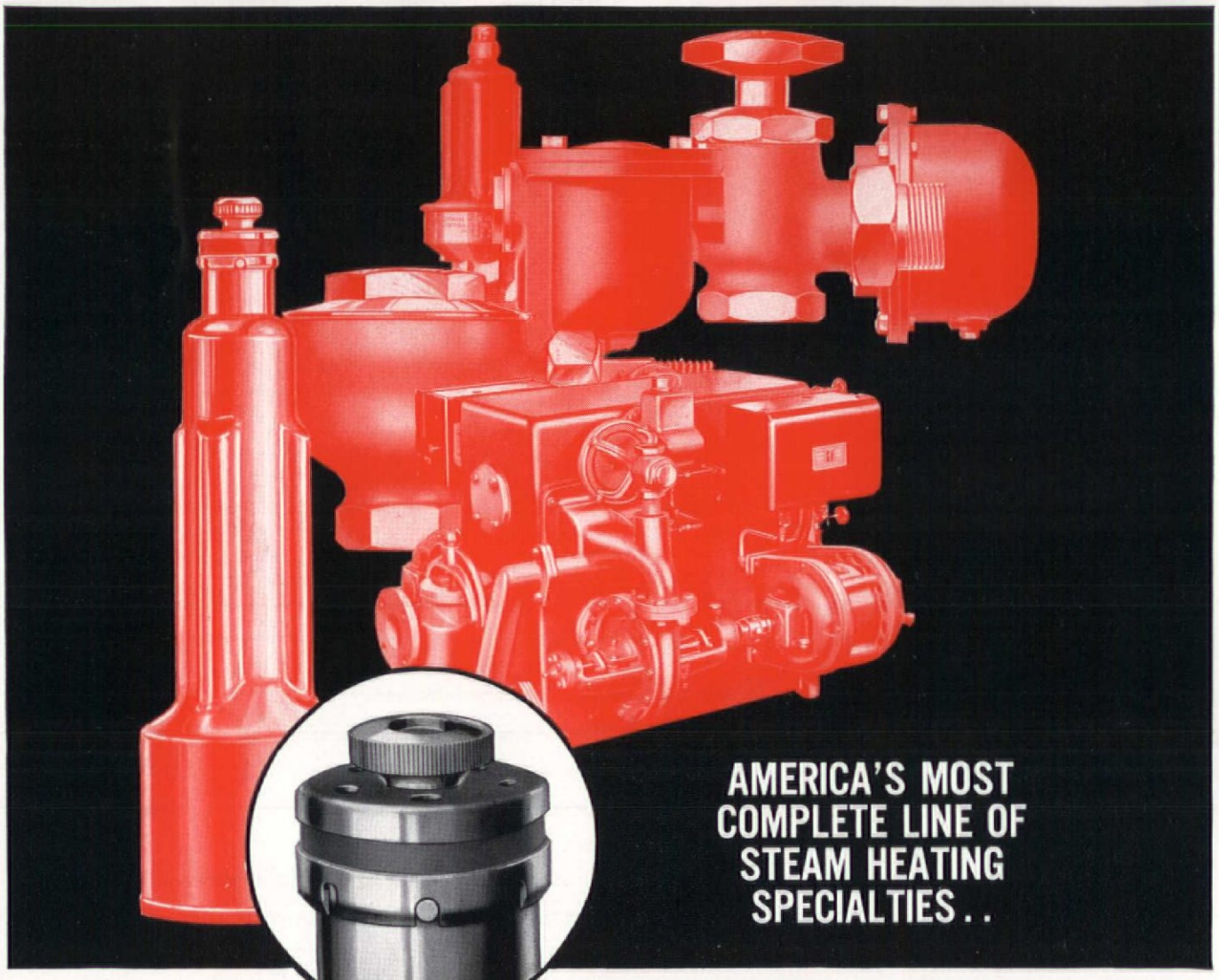

New 6-speed vent port on Hoffman radiator valves.

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BOOKS

(Continued from page 27)

INDUSTRIAL ARCHITECTURE. Edited by C. G. Holme, introduction by L. H. Bucknell. The Studio Publications, Inc., New York. 208 pp., 9 x 11½. $10.00

There is no force in modern life today with an influence comparable to that of industry. It is reasonable to expect, therefore, that this collection of factories, warehouses, power plants, tunnel works, garages, research stations, markets, railway buildings, etc., should represent the most vital architecture being produced in the world today. And it does. Forms conditioned by the special requirements of industry carry a conviction equaled by no other contemporary building types, and these forms are primarily respon-

WAREHOUSE AT THE HAGUE, HOLLAND

sible for changing all inherited notions as to what constitutes beautiful proportion. The machine-for-living-in type of house exists not so much because of the inexorable demands of new structural systems, but because we see a new kind of beauty in forms originally evolved in machines and the structures that shelter them. This book shows the very core of an architectural revolution. It might be well to note that most of the buildings were designed by architects, and include Peter Behrens' turbine factory in Berlin, famed ancestor of most of today's industrial and commercial architecture. In this notable collection of buildings American industrial architecture is conspicuous by its absence; there are a few dramatic shots of smokestacks and that is about all. It might be well for our industrialists, as well as architects, to see this book.

(Continued on page 58)

BOOKS

(Continued from page 57)

ART IN THE U. S. S. R. Edited by C. G. Holme. The Studio Publications, Inc. 137 pages, about 100 illustrations of which six are in color. 8¼ x 11½. Paper $3.50, cloth $4.50

An attractively printed and illustrated survey of the arts in Soviet Russia, dealing with architecture, sculpture, painting, theater, cinema, and handicrafts, each with an introductory article by a Soviet authority on the subject. The book reveals Russian art as much less revolutionary than its politics. Painting and sculpture, for example, follow

"THE DEFENSE OF PETROGRAD" BY ALEXANDER DEINEKA

Goya, Renoir, Epstein and Rodin rather than Lipchitz, Braque, or Leger, and in architecture there is a distinct trend toward a revival of classical precedent. The cinema, theater, and graphic arts sections are the most stimulating parts of the book.

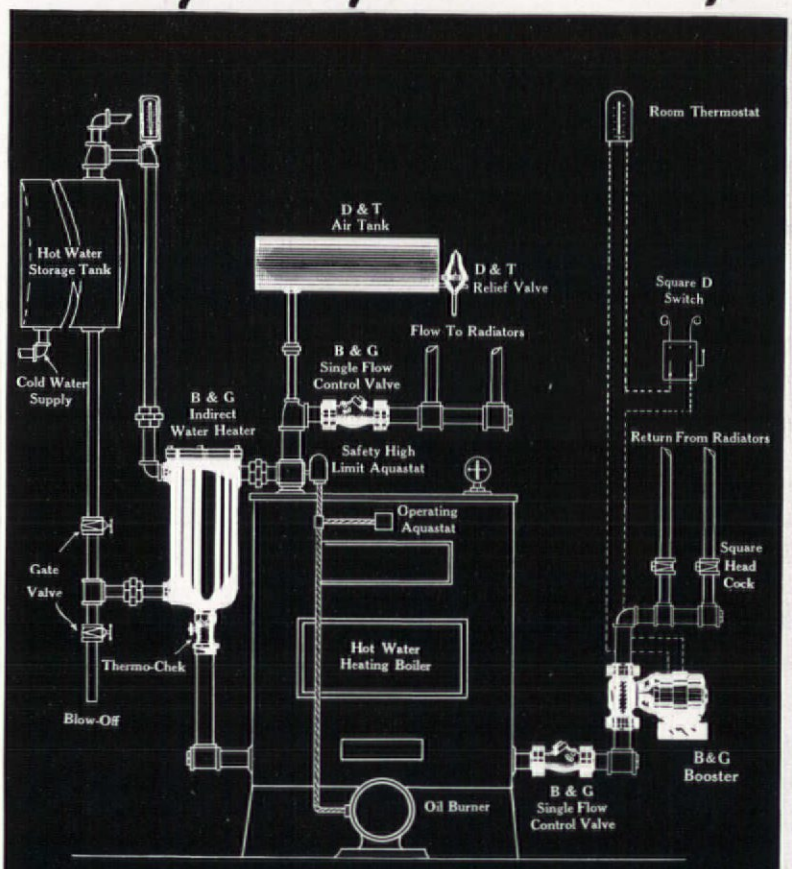
ARCHITECTS' SPECIFICATIONS — HOW TO WRITE THEM, by Goldwin Goldsmith, John Wiley & Sons, Inc. 128 pp., 8¾ x 11¼, $2.50.

Not a manual, this treatise on the complex subject of specification writing is a welcome addition to existing literature. It presents in a very clear manner the basic problems confronting the writer of specifications, and goes into a detailed examination of some of the best systems of making notes, displaying drawings, and organization by trade sections. Pitfalls to be avoided are discussed at some length, and an entire chapter is devoted to "the pernicious 'or equal' " phrase. The book deals very completely with standard methods of writing specification clauses, index systems, arrangement of subheads, and even considers the make-up and reproduction of the finished specification. One of the most interesting and valuable sections is the chapter on specification references, which treats not only material sources, such as Sweet's, but also contains a bibliography of specification manuals and articles on the subject.

As a service to interested readers, The Architectural Forum *will undertake to order copies of foreign books or others not conveniently obtainable locally, which have been reviewed in this department. Checks and money orders to be made payable to* The Architectural Forum.

ITS SENSATIONAL ECONOMY AND COMFORT FEATURES HAVE CREATED A NEW HOME-HEATING STANDARD...

B & G Triple Duty Heating System



Typical installation of a B & G Triple Duty System. The necessary equipment can be installed on either oil, stoker or hand-fired hot water boilers.

In no other heating system is the growing demand for superior heating at low cost so amply fulfilled as by the multiple advantages of the B & G Triple Duty System.

Ample hot water—winter and summer

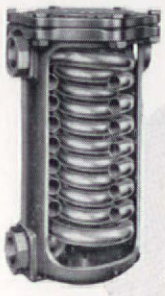
This mechanically circulated hot water system employs high temperature water, so that pipes and radiators need be no larger than those required for a steam installation. It has amazing flexibility . . . heat is almost instantaneously supplied to radiators upon demand by the thermostat . . . and conversely, hot water is confined to the boiler and Indirect Heater when the need for heat ceases. Therefore, room temperatures are held at a uniform, healthful degree, regardless of sudden weather changes.

Uniform healthful temperature

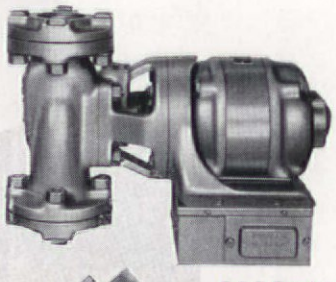
A major feature of the B & G Triple Duty System is its provision for winter and summer indirect heating of domestic hot water—a method which saves from 50 to 75% of the usual cost. This saving, combined with the economies effected by the system as a whole, establishes a new low in heating cost.

Designers of today's homes should have all the facts on this great advance in heating. Complete literature and design data are available upon request. Write today.

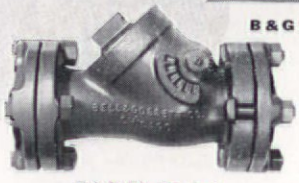
BELL & GOSSETT CO.
3000 WALLACE STREET . . . CHICAGO



B & G Indirect Heater



B & G Booster



B & G Flo-Control Valve

THESE ARE THE SIMPLE UNITS WHICH COMPRISE A B & G TRIPLE DUTY SYSTEM

PRODUCTS AND PRACTICE

(Continued from page 22)

APPROPRIATION FOR TESTING BUILDING MATERIALS

An allotment of $75,000 has been made from WPA funds to the National Bureau of Standards for tests and research on the durability of building materials. This important branch of the Department of Commerce suffered a severe curtailment of funds in the economy wave inaugurated in 1932. As the result of a reduction in personnel much of the work of the Bureau was brought to a sudden stop, and in the rush to spend hundreds of millions for construction by emergency administrations this old line Government bureau was forgotten.

When the engineers and architects of the Federal Housing Administration turned to the Bureau of Standards for tests and advice on building materials and methods of construction, they were surprised to learn that the Bureau had neither money nor personnel for this work. As the result of a strong recommendation to Assistant Director Peter Grimm of the National Emergency Council, $75,000 was secured, with the approval of Comptroller General McCarl, from funds allocated to the Works Progress Administration, to be used by the Bureau to determine the durability of building materials.

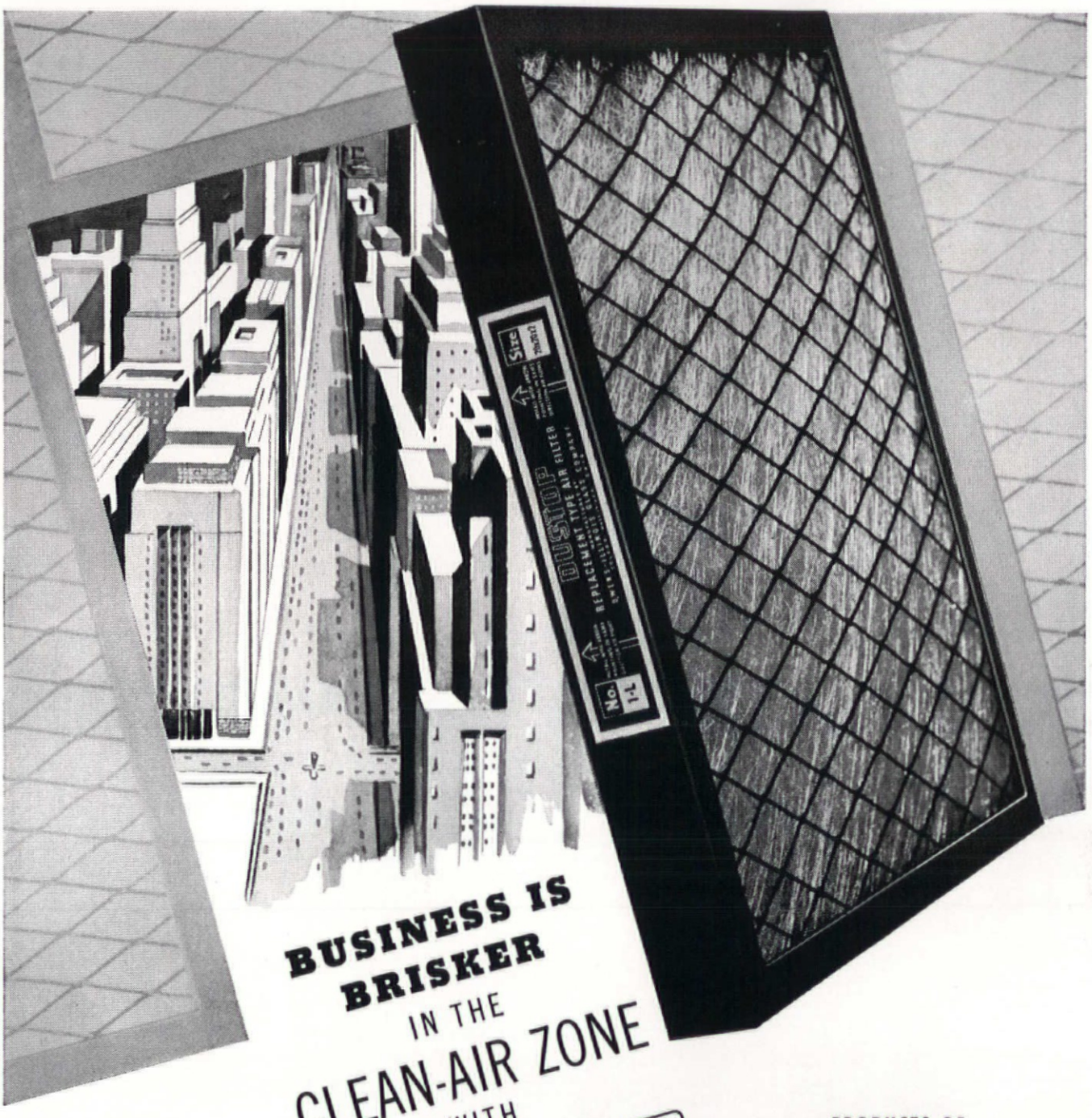
A special committee composed of technicians from the various Government agencies interested in housing is advising with the experts of the Bureau of Standards on the spending of this money. Their recommendations include tests on floor coverings and coatings, light metal construction, roof coverings, calking and expansion joint materials, pipe joints, thermal insulation, and on the determination of ways of building weathertight masonry walls. They have suggested that many tests which were well under way when stopped by lack of funds be completed and the results published, and that the many papers and publications of the Bureau on building material be brought up to date, consolidated, and put into such shape as to be easily used for ready reference. It is to be hoped that before the money is exhausted additional funds will be made available to carry on the work. The building industry stands in great need of such an unbiased and authentic source of technical information. The National Bureau of Standards and the Forest Products Laboratory of the Department of Agriculture which studies and experiments with wood and wood products have the equipment and a nucleus of trained scientists and technicians at their disposal.

STRENGTH AND RELATED PROPERTIES OF AMERICAN WOODS

Released by the Government Printing Office this month is a new bulletin of the Forest Products Laboratory that places before wood users the most comprehensive information yet assembled on the mechanical and related properties of American woods. The strength values given are derived first hand from more than a quarter of a million tests on 164 species of wood.

Quantitative data were thus obtained on 17 mechanical properties or factors for each wood, including crushing strength, modulus of elasticity, modulus of rupture, toughness, hardness, shear strength, splitting resistance, and tension perpendicular to the grain of the wood. Supplementary to these mechanical tests, measurements were made to determine the more important physical characteristics, such as percentage shrinkage from green to oven-dry condition, and number of growth rings per inch. All this information is given in table form in the new publication.

(Continued on page 64)



BUSINESS IS BRISKER IN THE CLEAN-AIR ZONE WITH DUSTOP

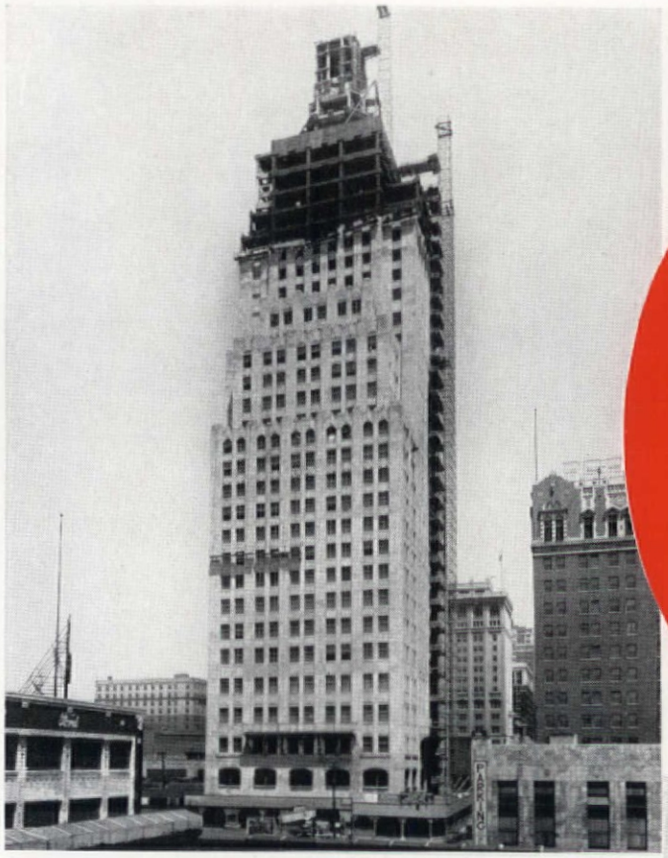
REPLACEMENT-TYPE AIR FILTERS

● Clean stocks in stores, clean air to breathe in theatres, industrial plants and offices—these attract the crowds, the tenants and make for greater worker-efficiency. Dust-Stop Replacement-Type Air Filters offer the most efficient and economical road to that Clean-Air Zone. It costs only 1c per c.f.m. to install and only 3/10c to 4/10c per c.f.m. per year for maintenance.

PRODUCTS OF
OWENS-ILLINOIS GLASS COMPANY
Industrial Materials Division, Newark, Ohio.
Distributors carrying complete stocks of Dust-Stop replacement filters located in all principal cities. (Dust-Stop is assembled and installed in Canada by General Steel Wares, Ltd., Toronto.)

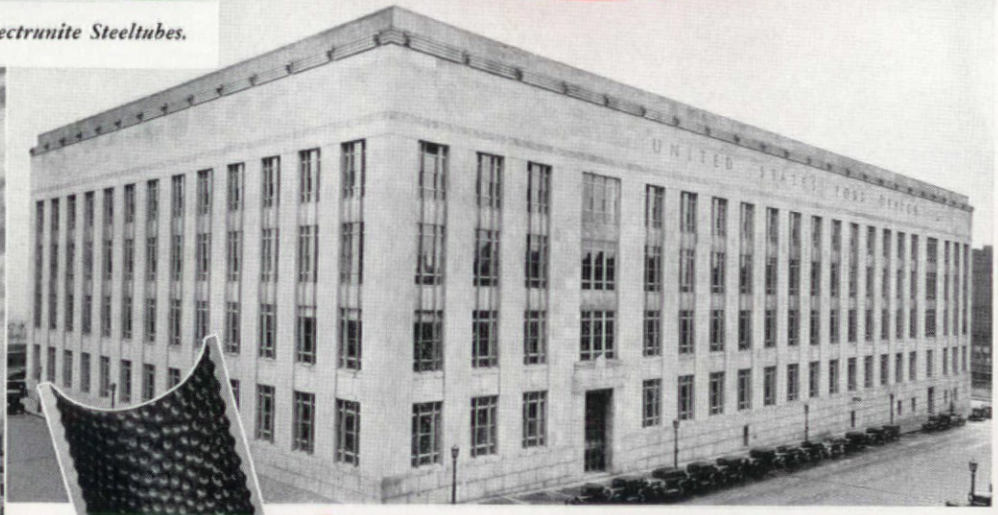
OWENS-ILLINOIS
Fiberglas
DUST-STOP AIR FILTERS
INSULATING BLANKETS
PIPE INSULATION
DISTRIBUTED BY OWENS-ILLINOIS GLASS COMPANY
...and "RED TOP" *Insulating Wool, distributed by United States Gypsum Co.*

100,000 BUILDING OWNERS



Kansas City Office Building wired in Electrunite Steeltubes.

St. Paul, Minn., Bank Building—185,000 feet of Electrunite Steeltubes.



Cleveland's new $3,000,000 Post Office. 300,000 feet of Electrunite Steeltubes used.

Electrunite Steeltubes protects wiring in this Jackson, Miss., Apartment Building.

Modern type residence equipped with Electrunite Steeltubes.

can't be wrong-

ELECTRICALLY · WELDED ·

IN BUILDINGS OF EVERY TYPE

ELECTRUNITE

REG. U. S. PATENT OFFICE

Steeltubes

IS AFFORDING PROTECTION TO ELECTRICAL WIRING . . . .

More than a hundred million feet of this modern electrical metallic tubing are giving complete mechanical and electrical protection to wiring in more than 100,000 homes, office buildings, municipal buildings, hotels, hospitals and other types of structures.

Electrunite Steeltubes simplifies wiring. It cuts and bends easily. It requires no threading. Three simple fittings adapt it to any work. It speeds erection. It costs less. It takes up less space in floors, walls and ceilings. It is easier for pulling or pushing cable. It is not a substitute for any other protective raceway—it is the original electrical metallic tubing developed under the Johnston process of electrical welding to serve as a raceway for wires, offering all of the mechanical and electrical protection that is necessary in such a system.

Architects can specify Electrunite Steeltubes with every assurance that contractors can obtain it without delay through one of the 320 licensed distributors—including all of the branches of the Graybar Electric Co. and Westinghouse Electric Supply Co.—now carrying it in stock in all distribution centers.

Electrical Division

Steel and Tubes *Inc.*

WORLD'S LARGEST PRODUCER OF ELECTRICALLY WELDED TUBING

CLEVELAND . . . OHIO

SUBSIDIARY OF REPUBLIC STEEL CORPORATION

FOLLOW THESE SPECIFICATIONS AS GIVEN IN SWEET'S CATALOG

All electrical conductors shall be enclosed in Rigid Electrunite Steeltubes Electrical Metallic Tubing, as manufactured by Steel and Tubes, Inc., Cleveland, Ohio, sizes ½ in. to 2 in. inclusive. Tubing shall be made from S.A.E. 1010 flat cold rolled steel, galvanized and manufactured in accordance with Underwriters' Laboratories Standards, and so labeled.

Electrunite Steeltubes shall have electrically welded seams and shall be installed in accordance with the regulations of the National Electrical Code. Compression couplings and box connectors used in the installation of Electrunite Steeltubes shall be Underwriters' approved type and so listed.

Knurled inside finish available in ½", ¾" and 1" sizes. Patent No. 1,962,876

PRODUCTS AND PRACTICE

(Continued from page 60)

The information on properties may be used not only for comparing species but also for calculating the strength of wooden members, for establishing safe working stresses when used in conjunction with the results of tests on structural timbers, and for grouping species into classes of approximately like properties for various purposes. Included also are figures on the average weight of the different species.

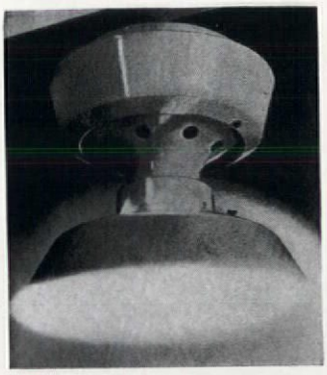
The bulletin supersedes U. S. Department of Agriculture bulletin No. 556, which is now out of print, and is distinguished from it by the fact that additional tests and additional species are included and that adjustment has been made to a common moisture content. Furthermore, the new bulletin through discussions of various factors that affect the strength properties of the wood makes it possible for the reader to apply the tabular data to his own specific problem more intelligently. Illustrative of these are the relation of weight or density to strength, how strength properties are affected by moisture in the wood, by extreme temperatures, by kiln drying, and by preservative treatment. In fact there are presented the answers to thousands of questions regarding the strength of wood, about which inquiries are made to the Laboratory through correspondence.

Authors of this publication are L. J. Markwardt and T. R. C. Wilson, senior engineers, Forest Products Laboratory, Forest Service, Madison, Wis.

Designated as United States Department of Agriculture Technical Bulletin No. 479, "Strength and Related Properties of Woods Grown in the United States," the booklet can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 25 cents a copy.

201. DAYLIGHT LIGHTING UNIT

A self-contained lighting unit with color characteristics said to approach actual daylight more closely than any commercial light source heretofore available has just been announced by the General Electric Vapor Lamp Company, Hoboken, N. J. Known as the *"circular mercury-incandescent,"* the light consists of a unit in which a circular mercury vapor tube and an incandescent lamp are combined beneath one reflector to provide the desired spectral balance. The new light is particularly recommended for industrial lighting applications involving accurate color differentiation, critical inspection and manufacturing operations which involve difficult visual problems.



The high blue and green emission characteristics of the mercury-vapor tube are blended with the excess red emission common to incandescent lamps in proportions which make for optimum visual characteristics wherever accurate color perception is an important consideration. Because this blending process is *additive*, the full light value of both tube and lamp are utilized in the new unit.

The unit equipped with a 33 inch mercury vapor tube and a 200-watt incandescent lamp operates at 500 watts. It is connected in the same manner as the ordinary incandescent light unit.

(Continued on page 68)

VERSATILITY

AN IMPORTANT CHARACTERISTIC OF TRANE SYSTEMS BECAUSE OUR COMPLETE RANGE OF EQUIPMENT GIVES FLEXIBILITY OF DESIGN

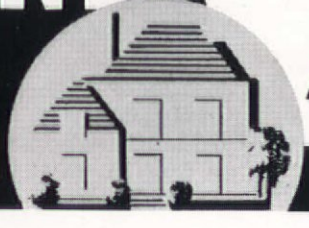
FOR ANY TYPE OF BUILDING

1. Hochschild and Kohn Department Store — Baltimore
2. Hickey Store — Detroit
3. Kemp Hotel — Wichita Falls

Air Conditioning equipment must be flexible enough in arrangement to meet the requirements of every type of building. TRANE provides the most complete range of equipment available in individual units for room installation; or coils and similar equipment for central systems using either direct expansion refrigerants, brine or water as the cooling medium. And back of this equipment is a field performance experience secured from hundreds of installations. There are no limitations to your air conditioning system design when you specify TRANE. We will be glad to send complete data for your files together with lists of installations in every type of building.

TRANE

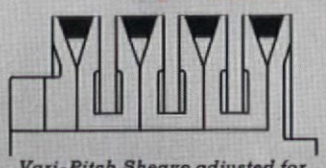
THE TRANE COMPANY, La Crosse, Wisconsin
Also Trane Company of Canada, Ltd., Toronto, Ont.



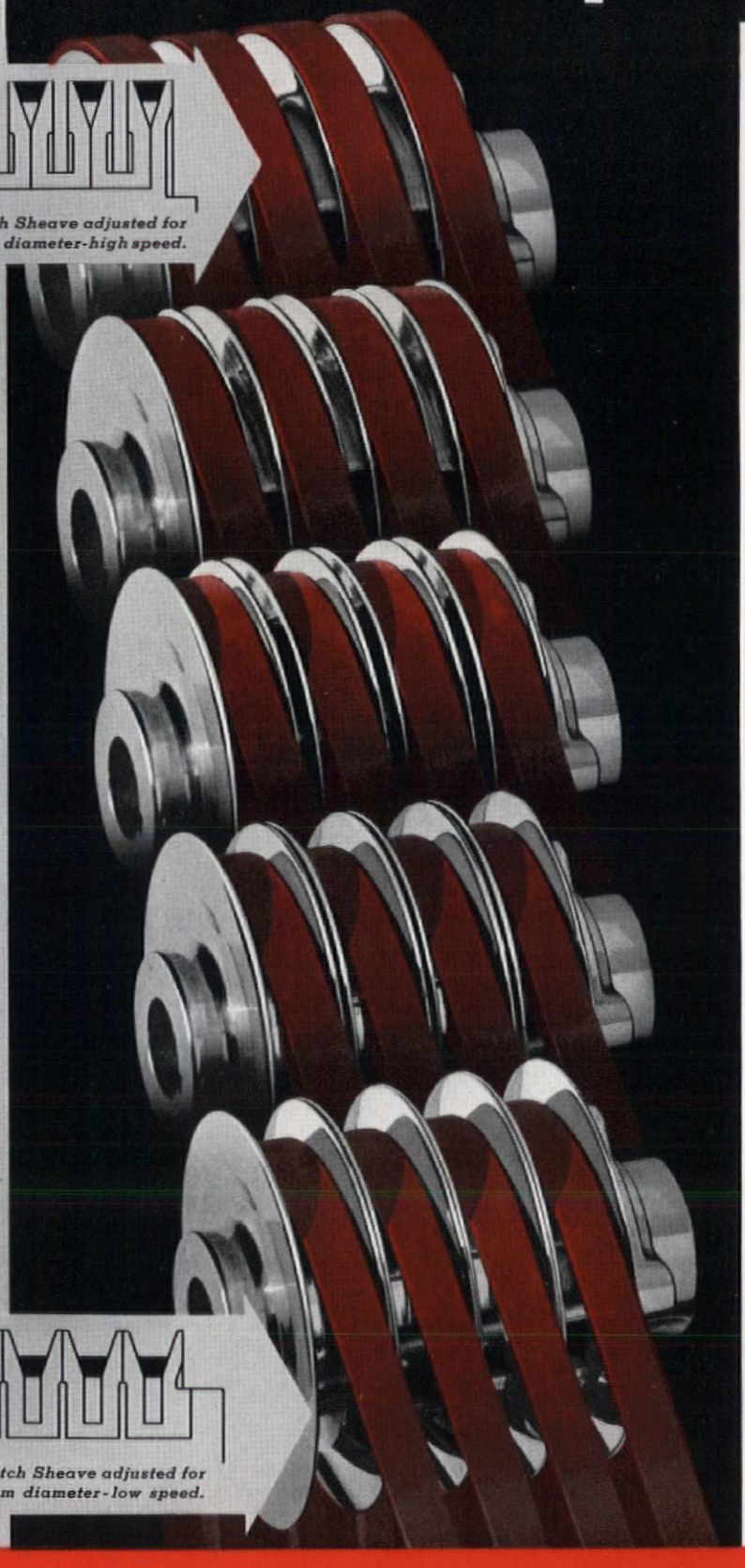
AIR-CONDITIONING

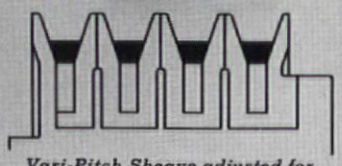
From HIGH speed to LOW spee

15% TO 25% VARIATION IN SPEED



Vari-Pitch Sheave adjusted for maximum diameter-high speed.





Vari-Pitch Sheave adjusted for minimum diameter-low speed.

WITH THE NEV

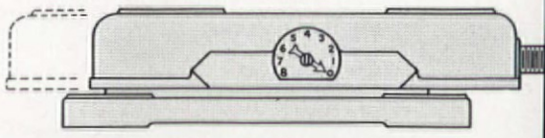
VARI-PITCH

TEXROPE SHEAVE

It requires nothing but a simple adjustme taking but a few moments, to alter the dia eter of this new Vari-Pitch Sheave for Texro V-Belt Drives; which means that you c alter the speed of your driven machines fr 15 to 25% per sheave; if both sheaves are this type a variation of 30 to 50% is possib

This vitally important new development power transmission permits you to make ferent products on the same machines, so of which require higher speeds, some low it permits you to experiment with differ speeds to ascertain at just what speed y machines show the greatest efficiency—a do all this without dismantling and buyi new drives, but simply by taking a few m ments to make the desired adjustment.

Vari-Pitch Texrope Sheaves are made stationary and motion control. To get full formation, write for Bulletin No. 1261.



Straitline Automatic Ball Bearing Motor Base develo for the motion control Vari-Pitch Sheave. You simply the hand wheel to alter the diameter of the sheave simultaneously the base moves forward or backwa maintain proper belt tension.

Belts by Goodrich

TEXROPE DRIVES

ORIGINATED BY ALLIS-CHALMERS

ALLIS-CHALMERS MANUFACTURING COMPANY · MILWAUKEE, WISCONSIN

TIME helps sales

ON BOTH SIDES OF THE TRACK

The 600,000 families who read TIME are the cream of the American market for building.

They build and remodel the homes that make the domestic building business.

They build and enlarge the plants that make the industrial building market.

That is undoubtedly why TIME is a leading advertising medium of building materials and equipment. Through this extensive advertising TIME readers have been instructed on many of the most modern materials, and equipment. You, therefore, find them ready to accept the quality products which you specify.

TIME
The Weekly Newsmagazine

These advertisers of building materials and equipment for home and industry used TIME in 1935

Allegheny Steels
American Radiator Heating
Armstrong's Linoleum Floors
Balsam-Wool Blanket Insulation
Barrett Roofs
Cabot's Collopakes and Double-White Paint
Carrara Structural Glass
Carrier Air Conditioning
Cast Iron Pipe
Clopay Shades
Combustioneer Automatic Coal Burner
Cutler-Hammer Motor Control
Cyclone Fence
Delco Appliances
Dulux
Dutch Boy White-Lead Paint
Frigidaire Unit Air Conditioner
General Electric Air Conditioning
Guthfan Conditionaire
ILG Electric Ventilator
'Incor' 24-Hour Cement
Iron Fireman
Johns-Manville Building Materials
Kelvinator Air Conditioning
Kohler of Kohler
Kreolite Floors
Layne Pumps and Well Water Systems
Mastipave
Minneapolis-Honeywell Control Systems
Monel Metal
Otis Elevators
Page Fence
Parks Certified Climate
Permutit Water Conditioning Equipment
Portland Cement Association
Revere Copper & Brass
Reynolds Metal
Robbins & Myers Motors
Ru-ber-oid Roofs
Scovill Manufacturing Company
Sheetrock
Sherwin-Williams Paints
Sloane-Blabon Linoleum
Square D Company
Sturtevant Air Conditioning
Taylor System of Control
Terminix Insulation
United States Steel
Ventura Home Conditioner
Whiting Stoker

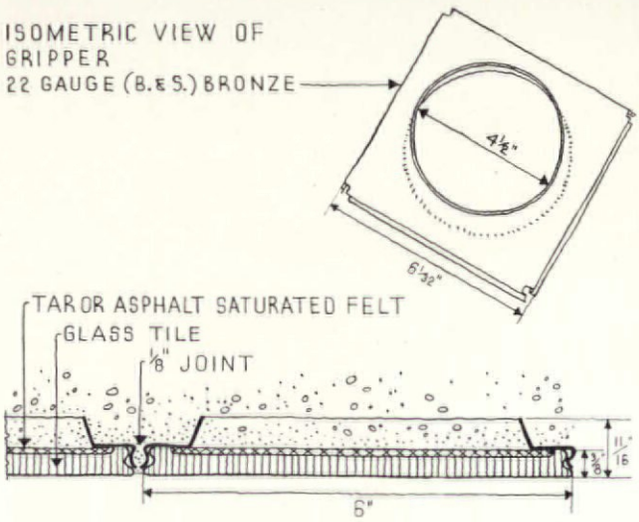
PRODUCTS AND PRACTICE

(Continued from page 64)

202. GLASS CEILING FOR THE NEW MIDTOWN HUDSON TUNNEL

THE tunnel, being constructed by the Port of New York Authority, with funds loaned by the Public Works Administration, will, when completed in 1938, provide another vehicular pathway between New York City and New Jersey under the Hudson River.

The Port Authority, after exhaustive tests, purchased from the Sealed Joint Products Company, Inc. of Rockefeller Plaza, New York City, a license to use their patented metal



gripper. This gripper makes it possible to hold tile, and particularly glass tile, to walls and ceilings, under trying conditions of stress, vibration, heat, cold, and moisture.

A contract has been awarded to the Macbeth-Evans Glass Company of Charleroi, Pennsylvania, to furnish some 800,000 glass ceiling units each consisting of a glass tile, asphalt saturated felt gasket, and bronze gripper. The glass tiles are six inches square, cream colored, with a stippled finish and are to reflect, without glare, at least 60 per cent of the light. The ceiling units are to be cast onto the under side of a concrete slab. Metal forms carry a layer of wallboard or plywood covered with gummed paper on which the units are set face down. The gummed paper, when moistened, holds the tile in place while reenforcing is being set and concrete is poured over the backs of the grippers. After the forms are removed, the gummed paper is washed off the face of the tile.

GLASS FACADE FOR THE RIALTO THEATER BUILDING, TIMES SQUARE, NEW YORK

Architect, Rosario Candela; Designer, Robert Allen of Candela's office; Glass Panels, Structural Glass Company; Glass Tile, Macbeth Evans Glass Company; Grippers to Hold Glass Tile and Erection of Gripper and Tile, Sealed Joint Products Company.

ALL facades of the building have been refaced with glass and a small amount of aluminum, and a shaft eighty feet high, constructed with a steel frame and faced with glass, is to be erected on the roof. The show windows of the lower two stories have been surrounded with panels of a highly polished blue glass, and the columns, spandrels, a fifteen foot parapet wall, and the tower are covered with translucent white glass tile, held in place by special grippers of the Sealed Joint Products Company, Inc., who also are erecting the grippers and tile.

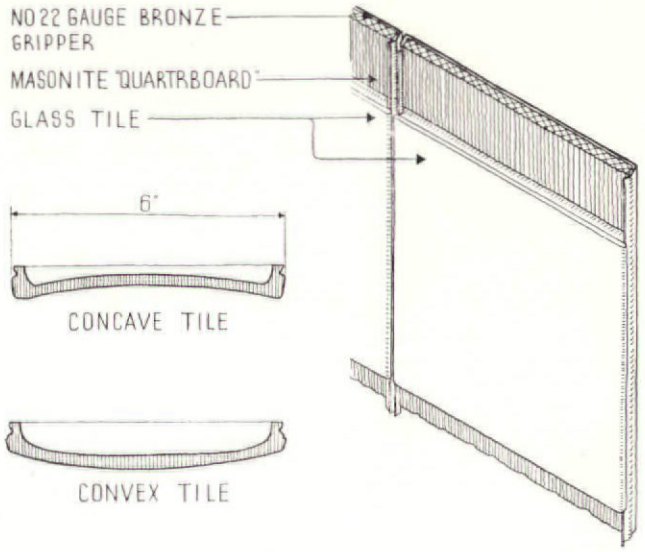
The grippers differ somewhat from those to be used in the

(Continued on page 69)

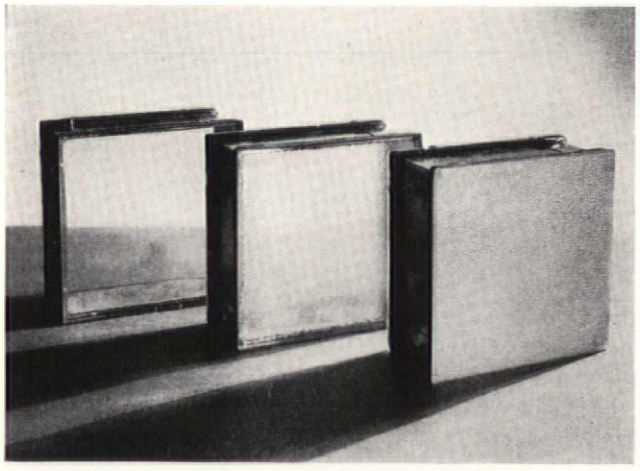
PRODUCTS AND PRACTICE

(Continued from page 68)

Hudson Tunnel. They consist of No. 22 gauge bronze channels with spring clip edges which grip the tile. In the channels are laid Masonite "Quartrboard" which is painted with aluminum bakelite varnish to increase the reflectivity of the glass. The "Quartrboard" is bolted to the frame or wall as plank running vertically. The glass tile is then set in the gripper and the joints painted with mastic.



Another modification of the gripper combines metal and glass into a wall unit which can be laid up with mortar like a masonry wall. A metal band with the spring grip head on all edges holds in place opposite each other two of the glass tiles to form a light-weight unit which can be clear, translucent, or opaque.



203. NEW WOOD FIBER INSULATION

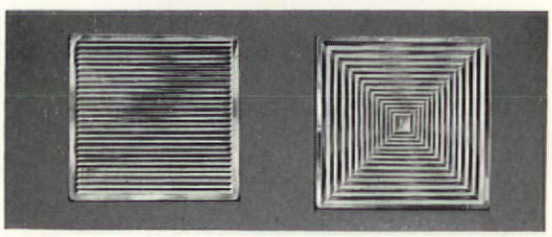
Kimbatts are a batt type of thermal insulation, consisting of 100 or more layers of creped cellulose made from chemically treated wood fibers. Each fiber is coated with a layer of molten asphalt before being formed into the creped ply. This is done by a special patented process for which Kimberly-Clark Corporation (well known for making printing paper from wood fiber) is exclusive licensee. The asphalt provides permanence, and resistance to water. Other materials are added to provide resistance to fire and vermin. The coated fibers are formed into continuous creped webs on specially designed machinery. Because of these features of individual

(Continued on page 71)

CREATIVE *design* IN LIGHTING INSTALLATIONS

Combining a scientific evenly diffused flood of light with great architectural flexibility, Macbeth Illuminating Plates are receiving wide attention . . . Above is a simple application of Macbeth Plates which might well be used to beautify and brighten old interiors as well as new ones . . . Macbeth Illuminating Plates offer unusual opportunities for unique and efficient lighting. They are available in a range of types and sizes . . . We shall be glad to send you details upon request.

MACBETH-EVANS GLASS COMPANY, CHARLEROI, PA.



PLATES ALSO SUITABLE FOR FLUSH FACE OR RECESSED WALL OR CEILING LIGHTING, COVES, SHOW WINDOWS OR OTHER UNUSUAL EFFECTS . . PLATES ARE AVAILABLE IN SEVERAL TONES AND FINISHES

MACBETH *Illuminating Elements*

PRODUCTS AND PRACTICE

(Continued from page 69)

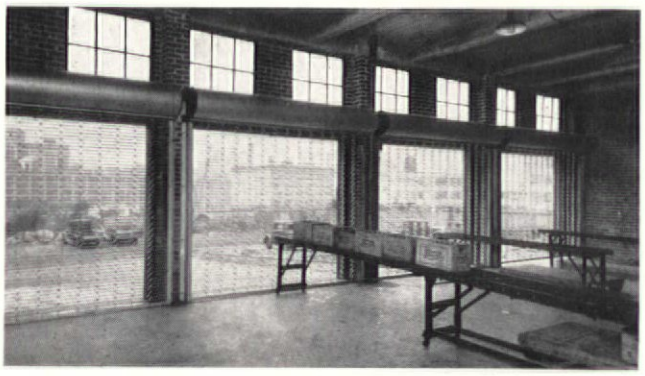
fiber treatment and web continuity, there are no loose fibers.

Kimbatts have a thermal conductivity (K) of 0.255 B. t. u./hr./sq. ft./in./° F. Their conductance at stud wall thickness is 0.070. Kimbatts have a density of 1.67 lbs. per cubic foot. As installed 100 sq. ft. weigh only 50.4 lbs., and add practically nothing to the structural load.

Kimbatts are provided in wall-thick batts to fit standard stud, joist and rafter spacings. They can be easily torn or cut to fit any irregular spaces. No special tools or experience are required for their installation. Simply lay a few daubs of cut-back asphalt cement on each batt.

204. ROLL-UP GRILLE

To meet the rapidly growing demand for a protective device for all types of door and window openings in commercial, industrial, and residential buildings, the Kinnear Manufacturing Company announces a new Steel Rolling Grille which has recently been added to their well-known line of Kinnear Rolling Doors. Without the sacrifice of air, light or vision, the Kinnear Rolling Grille provides a barrier against trespassing or burglary. Permanently installed and accurately counterbalanced, it can be quickly raised or lowered. And when closed it can be securely locked.



The Kinnear Rolling Grille can be built in various metals. Of an attractive design, it will harmonize with any style of architecture. The grille proper is composed of round steel bars connected by ornamental pressed steel links. The apertures in the grille are made small enough so as not to permit the admittance of a man's hand or projectiles. It coils on a heavy barrel above the lintel, is locked in and travels in guides mounted on the sides of the opening. Helical springs enclosed in the barrel provide accurate counterbalance. Coiling above the opening in a small space, this new grille may be either installed on the face of the wall or in reveals which are provided at the time the building is constructed. Embodying the same principles of construction as Kinnear Steel Rolling Doors, its adaptability and installation are very similar. It may be built in practically any size, size of the bars and links depending upon the size of the grille. It can also be operated manually, mechanically by means of crank or operating chain, or electrically.

205. TRIANGULAR PROTRACTOR

An ingenious protractor scale has been developed by the Triangular Protractor Co. which eliminates the ordinary protractor and combines an ordinary scale, a decimal scale, and trigonometric computor. It is a mathematical instrument for measuring and computing angles, triangles, complicated figures, roofs, etc., accurately. It is convenient to handle, its size being 2½ x 7¼ in. and is the only protractor of comparable size which gives minutes, seconds and degrees.

MANUFACTURERS' PUBLICATIONS

AMONG the manufacturers' publications recently received of interest to the architectural profession were the following:

PAINT

206. "Glorified Light" deals with the light reflectivity of painted surfaces and the importance of light intensities to the human eye. It explains how to obtain desired effects and protection by the use of certain paint products of the Pittsburgh Plate Glass Co.

LIGHTING

207. "Permaflector Lighting" lists many types of reflectors and their accessories, and gives data on lighting. Catalogue No. 37 of the Pittsburgh Reflector Co.

208. "Holophane Inbilt Lighting" illustrates light distribution and gives dimensional and estimating data for lighting units of the Holophane Co.

TILE

209. "Hanley Tiles for Walls and Floors" shows colors, designs, shapes, and sizes of unglazed floor and wall tiles of the Hanley Co.

GOLD LEAF

210. "Gold Leaf in Architecture" describes how gold leaf is made and used, with illustrations of its use by Hastings & Co.

HEATING AND AIR CONDITIONING

211. The C. A. Dunham Co. Hand Book No. 514 in 464 pages treats of the development of controlled heating and the principles and application of the Dunham Differential System. Piping design and equipment applications, installation diagrams, ventilation, unit ventilators and air conditioning applications, also unit heaters and concealed radiators are dealt with. There is also a section on auxiliary steam services and miscellaneous engineering data and tables.

212. A folder keyed to the A.I.A. Library System containing various booklets on "Supertex" oil burning and air conditioning equipment. Perfection Stove Co.

STEEL

213. "Sizes We Roll" by Inland Steel Co. gives complete size data on steel sheets, strip, bars, plates, structural shapes, and semi-finished steel products, with reference table useful in ordering steel. Sixty-four pages in a convenient size and shape for the pocket or office.

KITCHEN SINKS

214. "Silver Sheen" illustrates with dimensions "Enduro" stainless steel kitchen sinks of the Tracy Manufacturing Co.

REQUEST FOR DATA

To obtain any of the publications reviewed on these pages, indicate the number and send coupon to THE ARCHITECTURAL FORUM, 135 East 42nd St., New York

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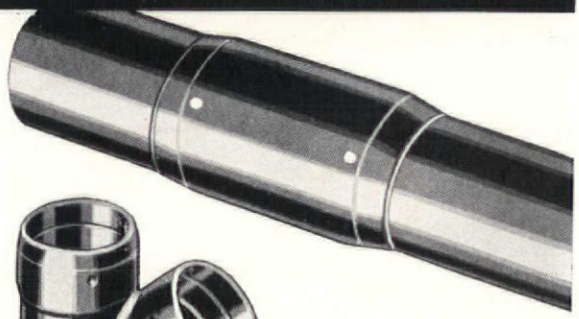

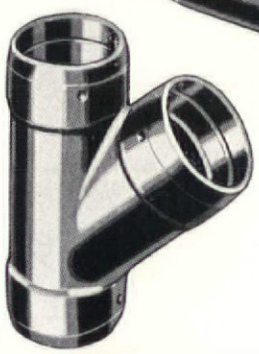

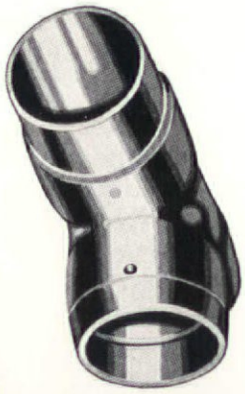

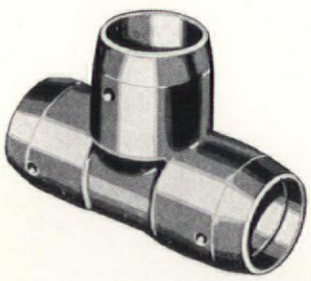

WHEN W. E. Becker acquired, with other properties, the management of the Edison Building in Toledo (then known as the Board of Trade Building) he found many parts of the building in urgent need of rehabilitation.

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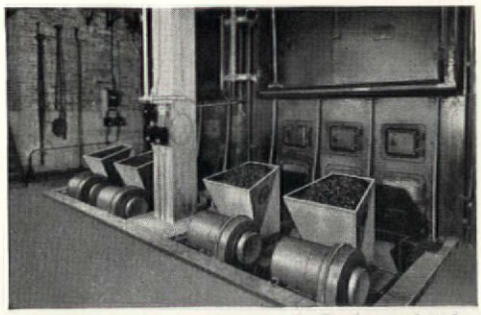

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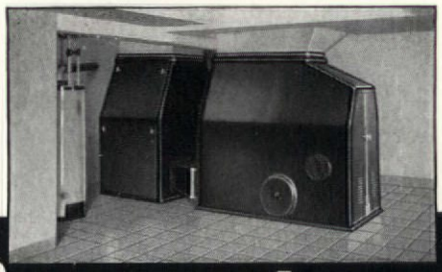

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It is easy to convince clients of the advantages of automatic oil heat and air conditioning. But, the question of expense is another matter. With the Gar Wood System, *guesswork is out* . . . for owners, everywhere, say Gar Wood oil heat costs less than coal. Specify a proved method! Specify the Gar Wood Tempered Aire Automatic Oil Furnace and Air Conditioning System. Write now for operating cost figures.

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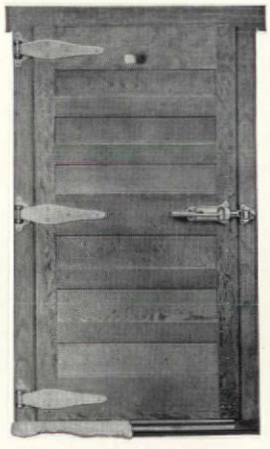

There is. It begins with the lumber. Long Leaf Douglas Fir is used in all York Doors. Why? Because Mother Nature knows which of her timbers will best withstand dampness and humidity!

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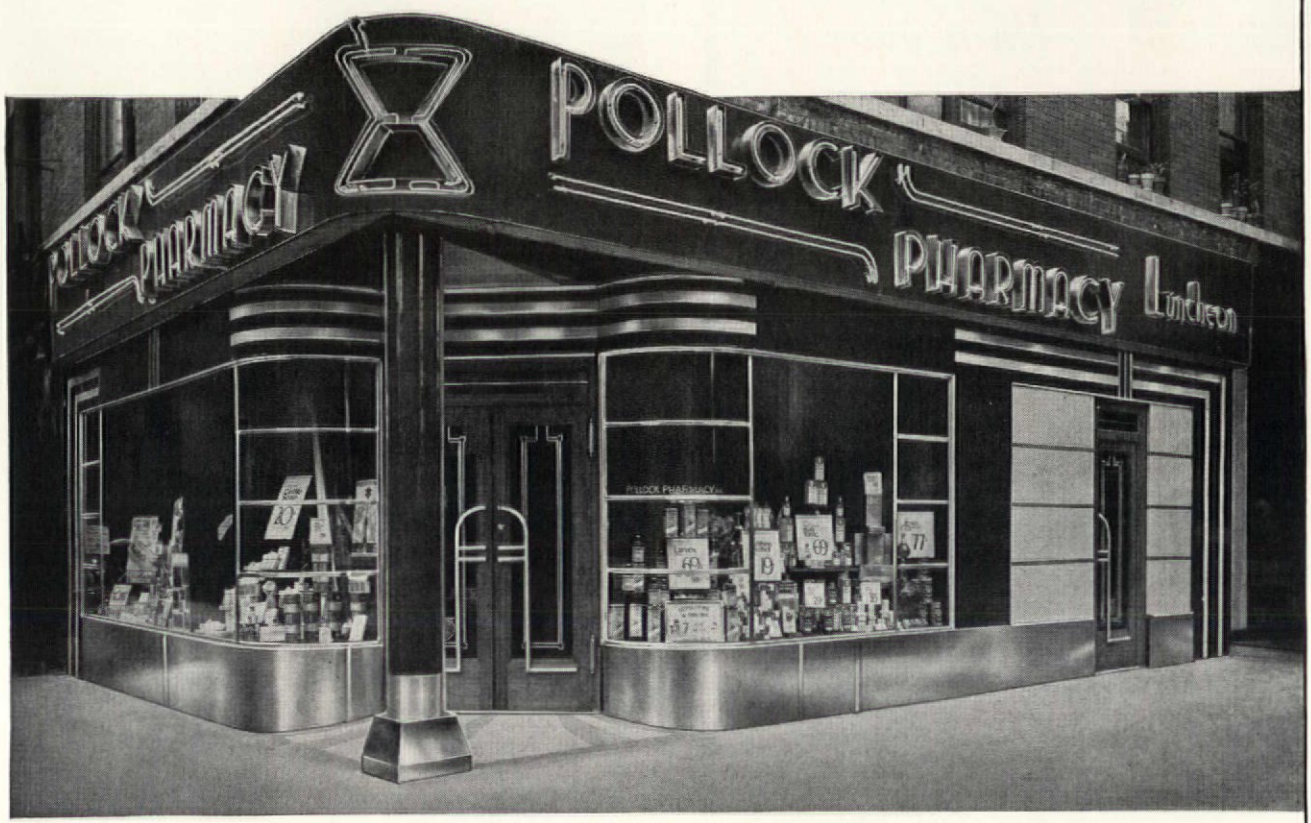
Stainless Steel

FOR MODERNIZING STORE FRONTS



● The modernization of store fronts with *stainless steel* is good business as well as good taste. The store front is the merchant's *silent salesman*, ever reflecting the quality of his store and merchandise. It can brighten the customer's outlook as well as the store's.

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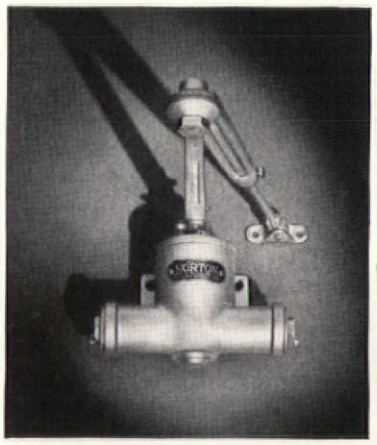

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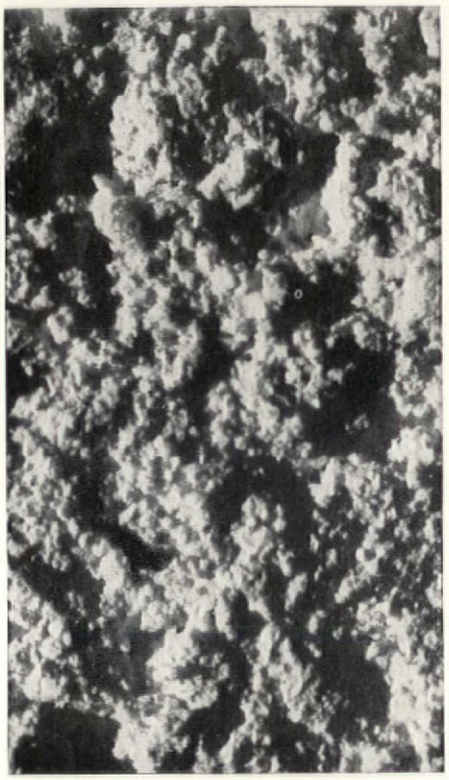

Micro-photograph, (ten diameters) of cross-section of HUSHKOTE.

Sound waves, penetrating into these interconnected surface-pores, air-pockets, and canals, are swallowed up, eliminating excessive reverberation.

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• HUSHKOTE represents the outcome of five years of research. HUSHKOTE utilizes internal activation to achieve the necessary porosity for sound absorption. Before Hushkote, acoustical properties in plaster were dependent on expensive mechanical means AFTER application.

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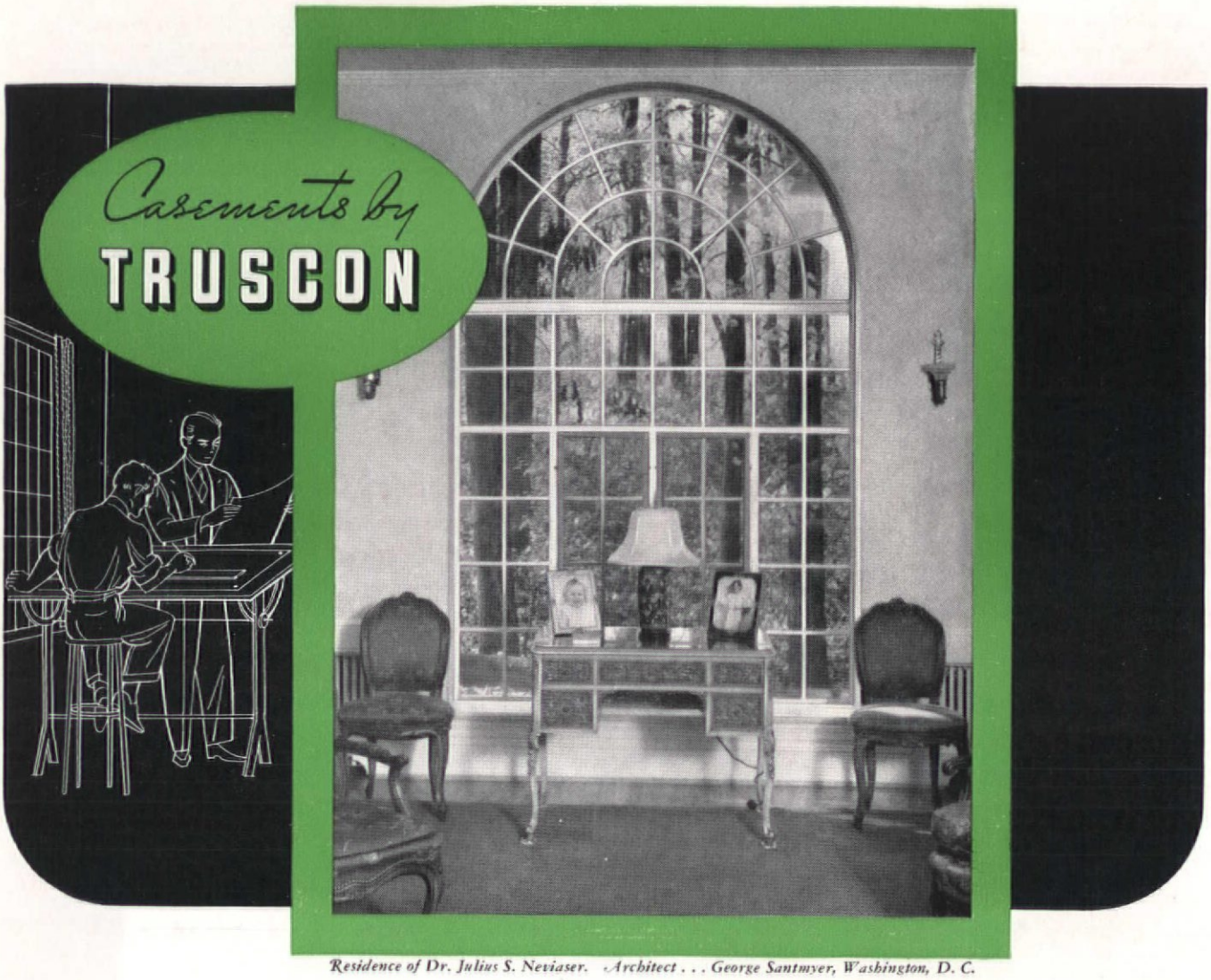

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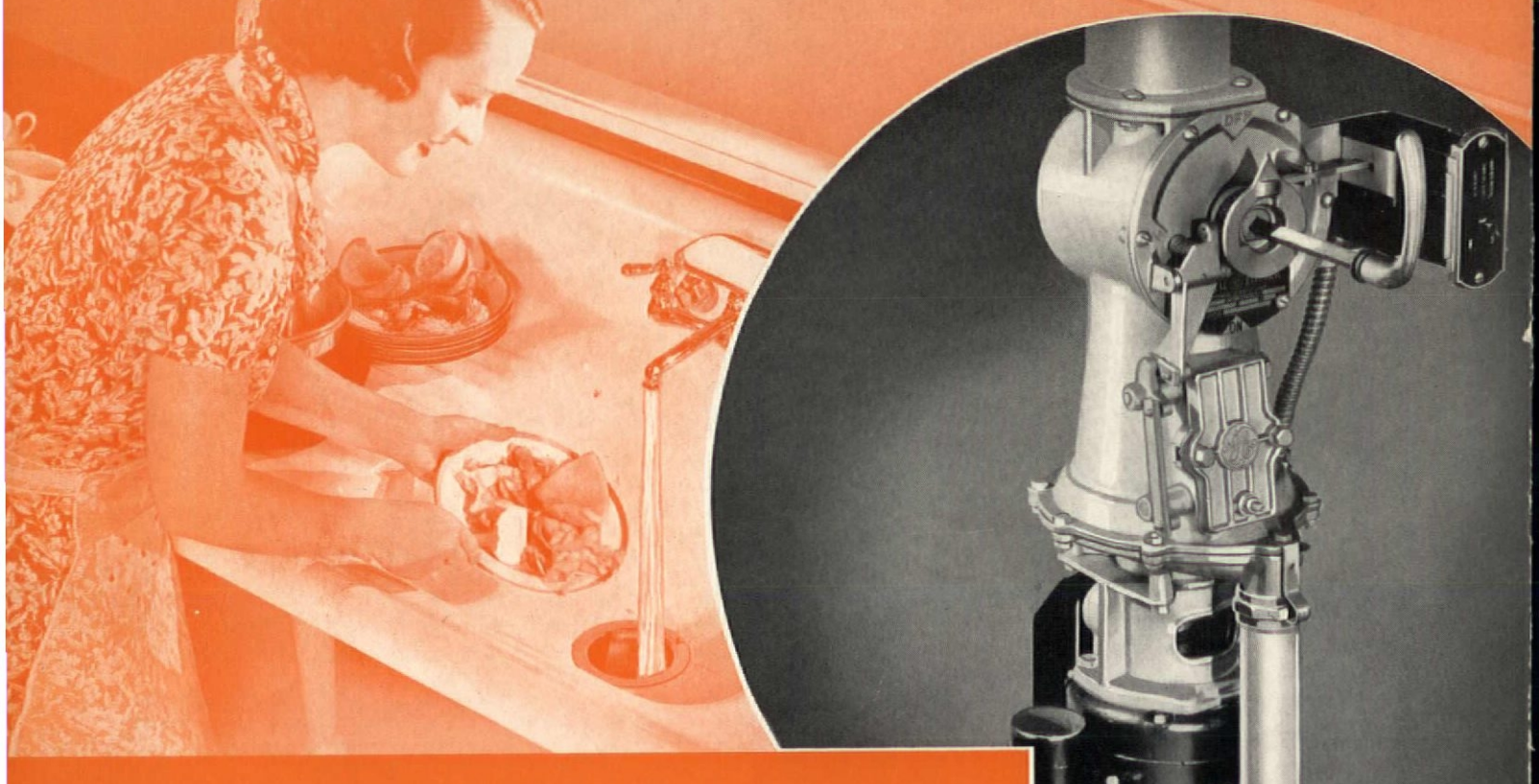

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